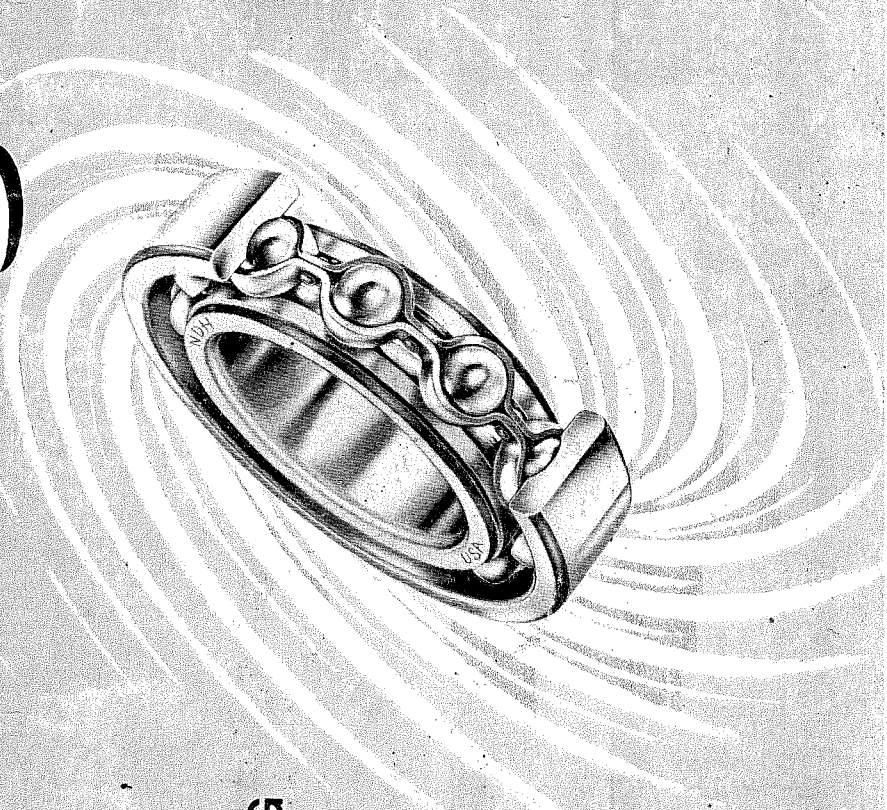




**New Departure Hyatt**

# Ball Bearings

- DIMENSIONS
- ENGINEERING



Seller warrants to the Buyer only that it will, at its option, repair or replace or refund Buyer's purchase price for any part of the new product manufactured or supplied by Seller which fails within twelve (12) months of the date of purchase by the Buyer, provided that such failure results from a defect in material or workmanship. Seller's obligation under this warranty is conditioned upon (i) Buyer returning during the twelve (12) month warranty period any product for which a claim is made F.O.B., to a Seller plant location as designated by Seller's representative, transportation charges pre-paid, with a written explanation of any claimed failure; and (ii) upon examination by Seller disclosing to Seller's satisfaction that the returned product was defective.

The provisions of this warranty shall not apply to any Seller's product which has been subject to accident, misuse, negligence, including but not limited to improper mounting or improper lubrication, or which shall have been repaired or altered in any way so as, in the judgment of Seller, to affect adversely its performance and reliability, nor which is used in an application for any purpose for which it is not designed. This warranty shall not cover the labor costs for the removal or replacement of the product from the end product.

THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE AND OF ANY OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF SELLER, INCLUDING NON-CONTRACTUAL LIABILITIES FOR PERSONAL INJURY OR PROPERTY DAMAGE OR ANY OTHER PRODUCT LIABILITIES BASED UPON NEGLIGENCE OR STRICT LIABILITY. IN NO EVENT, WHETHER AS A RESULT OF BREACH OF CONTRACT OR WARRANTY, ALLEGED NEGLIGENCE OR OTHERWISE, SHALL SELLER BE LIABLE FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES, INCLUDING BUT NOT LIMITED TO LOSS OF PROFITS OR REVENUE, LOSS OF USE OF THE PRODUCT OR OTHER EQUIPMENT, COSTS OF SUBSTITUTE EQUIPMENT DOWNTIME COSTS, OR CLAIMS OF CUSTOMERS OF BUYER FOR SUCH DAMAGES.

SELLER NEITHER ASSUMES NOR AUTHORIZES ANY OTHER PERSON TO ASSUME FOR IT ANY OTHER LIABILITY IN CONNECTION WITH ITS PRODUCTS.

Seller reserves the right to discontinue or suspend the sale of any product covered by this warranty and to make changes in the design, specifications or process of manufacture related to the product without notice.

# BALL BEARING DIMENSIONAL DATA INDEX

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# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## NUMERICAL INDEX

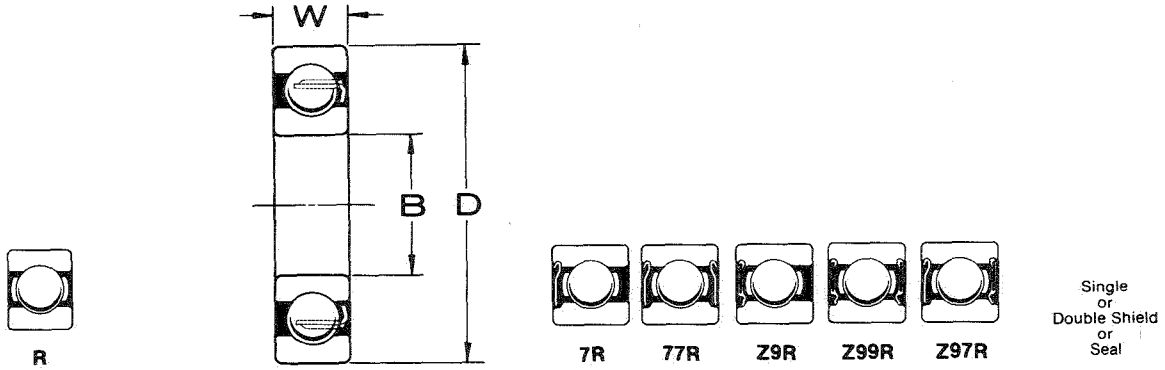
This Index covers the series which appear in the tables on pages 3 through 35. For bearing numbers which are not shown within the listed series, see STANDARD AND SPECIAL BALL BEARINGS, pages 36 through 47 or SPECIAL BALL BEARINGS FOR FARM IMPLEMENTS, pages 21 through 25.

Bearing No's.	Page No.	Bearing No's.	Page No.	Bearing No's.	Page No.
R2 to R24	3	C8006 to C8039	12	CWC87006 to CWC87039	12
7R2 to Z99R22	3	WC8006 to WC8039	12	87500 to 87514	13
TS2	33	CWC8006 to CWC8039	12	C87500 to C87508	13
CF2-108 to CF3-200	19	8500 to 8514	13	WC87500 to WC87508	13
PF2-212 to PF3-800	20	C8500 to C8508 & C8511	13	CWC87500 to CWC87508	13
PV2-404	20	WC8500 to WC8509	13	87602 to 87609	13
E008 to E207	26-29	CWC8500 to CWC8508	13	C87602 to C87606	13
RGTA008 to RGTA109	27	8602 to 8609	13	88006 to 88039	12
RGWA100 to RGWA107	28	C8602 to C8605	13	C88006 to C88039	12
RGWAB008V to RGWAB207V	29	Z9035 to Z9039	3	WC88006 to WC88039	12
RWA108	28	Z9500 to Z9512	5	CWC88006 to CWC88039	12
TA008 to TA109	26	Z9602 to Z9610	6	88500 to 88609	13
WA014 to WA112	28	20200 to 20230	11	C88500 to C88508 & C88511	13
88P100 to 88P910	15	H20200 to H20230	11	WC88500 to WC88508 & WC88510	13
99A110 to 99A207	26	H20300 to H20322	11	CWC88500 to CWC88508	13
TP15-500 to TP21-500	32	30203 to 30230	11	88602 to 88609	13
TM15-505 to TM22-505	32	41206 to 41320	7	C88603 to C88606	13
TP-824	32	43200 to 43222	5	Z97035 to Z97039	3
RBTM17 & 17A	32	43300 to 43319	6	Z97500 to Z97512	5
TP25, 26 & 31	32	45200 to 45316	8	Z97602 to Z97610	6
TP30A	33	45205W to 45313W	9	Z99035 to Z99039	3
34 to 39	3	45500 to 45613	8	Z99500 to Z99512	5
FL40 to FL100	30	45507W to 45609	9	Z99602 to Z99610	6
RFL52C to RFL90A	31	47206 to 47317	7	455500 to 455610	8
OL00 to OL36	10	47500 to 47522	5	477206 to 477317	7
HOL00 to HOL28	10	47600 to 47617	6	477500 to 477522	5
3L00 to 3L36	4	48013 to 48026	12	477600 to 477617	6
43L02 to 43L28	4	C48013 to C48026	12	487009 to 487026	12
73L00 to 73L28	4	WC48013 to WC48026	12	C487009 to C487026	12
473L02 to 473L28	4	CWC48013 to CWC48026	12	487500 to 487609	13
773L00 to 773L28	4	48501 to 48607	13	C487500 to C487606	13
4773L02 to 4773L28	4	C48501 to C48604	13	WC487504	13
1206 to 1322	7	WC48604	13	CWC487504	13
3200 to 3228	5	CWC48604	13	488009 to 488026	12
3300 to 3322	6	Z49500 to Z49512	5	C488009 to C488026	12
AS4508 to AS4511D	16	Z49602 to Z49610	6	WC488009 to WC488026	12
5200 to 5318	8	55500 to 55613	8	CWC488009 to CWC488026	12
5205W to 5313W	9	55506W to 55610W	9	488500 to 488609	13
5500 to 5613	8	77034 to 77039	3	C488500 to C488606	13
5506W to 5612W	9	77206 to 77318	7	WC488502 to WC488604	13
7034 to 7039	3	77500 to 77522	5	CWC488502 to CWC488604	13
7206 to 7318	7	77600 to 77620	6	Z497500 to Z497512	5
7500 to 7522	5	87006 to 87039	12	Z497602 to Z497610	6
7600 to 7620	6	C87006 to C87039	12	Z499500 to Z499512	5
8006 to 8039	12	WC87006 to WC87039	12	Z499602 to Z499610	6
				900537 to 900539	19

While great care has been taken in compiling these dimensions, it is impossible to guarantee completeness and accuracy of data. In specialized applications, such factors as internal clearance, type of retainer, type of lubricant etc. should be considered. If there is any question about the advisability of an interchange, consult your NDH Bearing Sales Engineer.

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

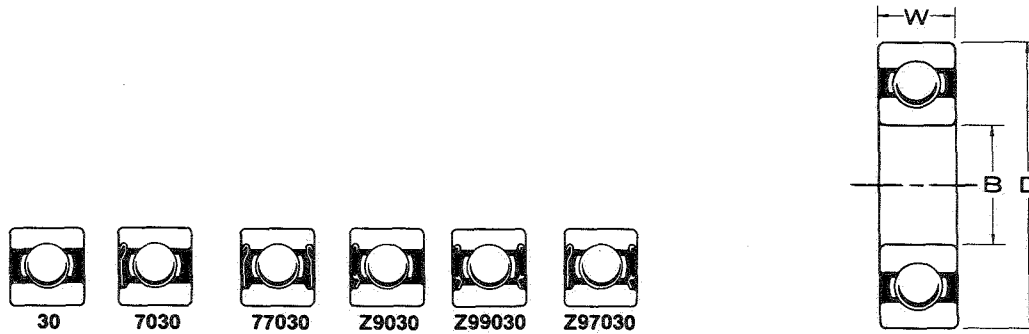
## SINGLE ROW RADIAL — CONRAD TYPE EXTRA LIGHT "INCH" TYPE - SERIES "R"



Bearing Size No.	Bore B		Diam. D		Open Bearing Width W		Bearing Size No.					Closed Bearing Width W		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM
	Fraction	Decimal	Fraction	Decimal	Fraction	Decimal	1 Shield	2 Shields	1Z Seal	2Z Seals	1Z Seal 1 Shield	Fraction	Decimal	
<b>Plain</b>														
R2	1/8"	.1250	3/8"	.3750	5/32"	.1562	7R2	77R2	-	-	-	5/32"	.1562	20
R2A	3/8"	.1250	1/2"	.5000	1/64"	.1719	7R2A	77R2A	-	-	-	1/64"	.1719	20
R3	3/16"	.1875	1/2"	.5000	5/32"	.1562	7R3	77R3	Z9R3	Z99R3	Z97R3	-	.1960	46
R4	1/4"	.2500	5/8"	.6250	-	.1960	7R4	77R4	Z9R4	Z99R4	Z97R4	-	.1960	51
R4A	1/4"	.2500	3/4"	.7500	7/32"	.2188	7R4A	77R4A	Z9R4A	Z99R4A	Z97R4A	9/32"	.2812	99
R6	3/8"	.3750	7/8"	.8750	7/32"	.2188	7R6	77R6	Z9R6	Z99R6	Z97R6	9/32"	.2812	132
R8	1/2"	.5000	1 1/8"	1.1250	1/4"	.2500	7R8	77R8	Z9R8	Z99R8	Z97R8	5/16"	.3125	255
R10	5/8"	.6250	1 3/8"	1.3750	9/32"	.2812	7R10	77R10	Z9R10	Z99R10	Z97R10	11/32"	.3438	295
R12	3/4"	.7500	1 5/8"	1.6250	3125	.3125	7R12	77R12	Z9R12	Z99R12	Z97R12	7/16"	.4375	510
R14	7/8"	.8750	1 7/8"	1.8750	3/8"	.3750	7R14	77R14	Z9R14	Z99R14	Z97R14	1/2"	.5000	550
R16	1"	1.0000	2"	2.0000	3/8"	.3750	7R16	77R16	Z9R16	Z99R16	Z97R16	1/2"	.5000	550
R18	1 1/8"	1.1250	2 1/8"	2.1250	3/8"	.3750	7R18	77R18	Z9R18	Z99R18	Z97R18	1/2"	.5000	760
R20	1 1/4"	1.2500	2 1/4"	2.2500	7/8"	.3750	-	-	-	-	-	-	-	800
R22	1 3/8"	1.3750	2 1/2"	2.5000	7/16"	.4375	7R22	77R22	Z9R22	Z99R22	Z97R22	9/16"	.5625	950
R24	1 1/2"	1.5000	2 5/8"	2.6250	7/16"	.4375	-	-	-	-	-	-	-	1000

### EXTRA SMALL SERIES - TYPE 30

For light radial or combined load duty required of bearings below 10mm bore



BEARING SIZE NUMBER						Bore B		Diameter D		Width W		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM
Plain	1 Shield	2 Shields	1 Seal	2 Seals	1 Seal 1 Shield	mm	inch	mm	inch	mm	inch	
34	7034*	77034*	-	-	-	4	.1575	16	.6299	5	.1969	97 <sup>‡</sup>
35	7035	77035	Z9035	Z99035	Z97035	5	.1969	19	.7480	6	.2362	117
36	7036	77036	Z9036	Z99036	Z97036	6	.2362	19	.7480	6	.2362	117
37	7037	77037	Z9037	Z99037	Z97037	7	.2756	22	.8661	7	.2756	132
38	7038	77038	Z9038	Z99038	Z97038	8	.3150	22	.8661	7	.2756	132
39	7039	77039	Z9039	Z99039	Z97039	9	.3543	26	1.0236	8	.3150	230

\*Shielded 34 uses the 77R4 ball complement.

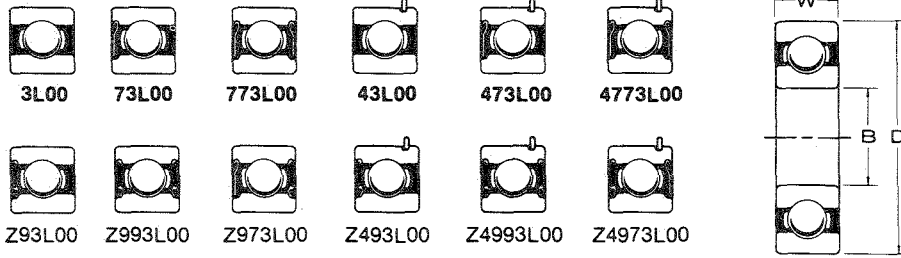
‡Shielded 34 Radial Capacity is 51.

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### SINGLE ROW - EXTRA LIGHT SERIES - TYPE 3L00

Non-Loading Groove

Deep symmetrical uninterrupted pathways. Contains the maximum number and size of balls that can be introduced by eccentric displacement of rings.

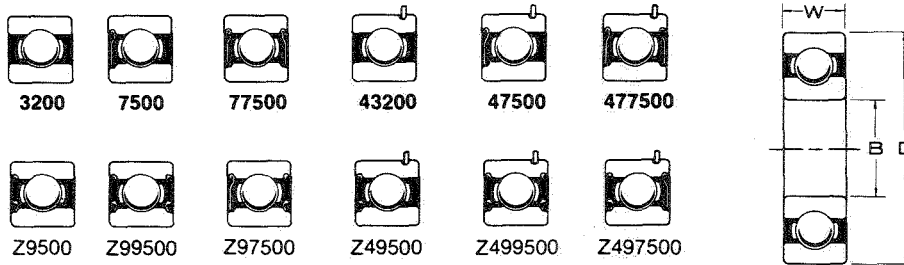


BEARING SIZE NUMBER						Bore B		Diameter D		Width W		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM
Plain 1Z Seal	1 Shield 2Z Seals	2 Shields 1Z Seal 1 Shield	Sn. Ring 1Z Seal	Sn. Ring 1 Shield 2Z Seals	Sn. Ring 2 Shields 1Z Seal 1 Shield	mm	inch	mm	inch	mm	inch	
3L00	73L00	773L00	-	-	-	10	.3937	26	1.0236	8	.3150	230
Z93L00	Z993L00	Z973L00	-	-	-							
3L01	73L01	773L01	-	-	-	12	.4724	28	1.1024	8	.3150	255
Z93L01	Z993L01	Z973L01	-	-	-							
3L02	73L02	773L02	43L02	-	4773L02	15	.5906	32	1.2598	9	.3543	275
Z93L02	Z993L02	Z973L02	Z493L02	Z4993L02	-							
3L03	73L03	773L03	43L03	473L03	4773L03	17	.6693	35	1.3780	10	.3937	295
Z93L03	Z993L03	Z973L03	Z493L03	Z4993L03	Z4973L03							
3L04	73L04	773L04	43L04	-	4773L04	20	.7874	42	1.6535	12	.4724	510
Z93L04	Z993L04	Z973L04	Z493L04	Z4993L04	Z4973L04							
3L05	73L05	773L05	43L05	473L05	4773L05	25	.9843	47	1.8504	12	.4724	550
Z93L05	Z993L05	Z973L05	Z493L05	Z4993L05	Z4973L05							
3L06	73L06	773L06	43L06	473L06	4773L06	30	1.1811	55	2.1654	13	.5118	760
Z93L06	Z993L06	Z973L06	Z493L06	Z4993L06	Z4973L06							
3L07	73L07	773L07	43L07	473L07	4773L07	35	1.3780	62	2.4409	14	.5512	950
Z93L07	Z993L07	Z973L07	Z493L07	Z4993L07	Z4973L07							
3L08	73L08	773L08	43L08	473L08	4773L08	40	1.5748	68	2.6772	15	.5906	1000
Z93L08	Z993L08	Z973L08	Z493L08	Z4993L08	-							
3L09	73L09	773L09	43L09	473L09	4773L09	45	1.7717	75	2.9528	16	.6299	1300
Z93L09	Z993L09	Z973L09	Z493L09	Z4993L09	Z4973L09							
3L10	73L10	773L10	43L10	473L10	4773L10	50	1.9685	80	3.1496	16	.6299	1360
Z93L10	Z993L10	Z973L10	Z493L10	Z4993L10	Z4973L10							
3L11	73L11	773L11	43L11	473L11	4773L11	55	2.1654	90	3.5433	18	.7087	1850
Z93L11	Z993L11	Z973L11	Z493L11	Z4993L11	-							
3L12	73L12	773L12	43L12	473L12	4773L12	60	2.3622	95	3.7402	18	.7087	1960
Z93L12	Z993L12	Z973L12	Z493L12	4993L12	-							
3L13	73L13	773L13	43L13	473L13	4773L13	65	2.5591	100	3.9370	18	.7087	2050
Z93L13	Z993L13	Z973L13	Z493L13	Z4993L13	-							
3L14	73L14	773L14	43L14	473L14	4773L14	70	2.7559	110	4.3307	20	.7874	2600
Z93L14	Z993L14	Z973L14	Z493L14	Z4993L14	-							
3L15	73L15	773L15	43L15	473L15	4773L15	75	2.9528	115	4.5276	20	.7874	2700
Z93L15	Z993L15	Z973L15	-	-	-							
3L16	73L16	773L16	43L16	473L16	4773L16	80	3.1496	125	4.9213	22	.8661	3200
3L17	73L17	773L17	43L17	473L17	4773L17	85	3.3465	130	5.1181	22	.8661	3350
3L18	73L18	773L18	43L18	473L18	4773L18	90	3.5433	140	5.5118	24	.9449	3850
3L19	73L19	773L19	-	-	-	95	3.7402	145	5.7087	24	.9449	4050
3L20	73L20	773L20	43L20	473L20	4773L20	100	3.9370	150	5.9055	24	.9449	4050
3L21	73L21	773L21	43L21	473L21	4773L21	105	4.1339	160	6.2992	26	1.0236	4750
3L22	73L22	773L22	43L22	473L22	4773L22	110	4.3307	170	6.6929	28	1.1024	5300
3L24	73L24	773L24	43L24	473L24	4773L24	120	4.7244	180	7.0866	28	1.1024	5500
3L26	-	-	43L26	-	-	130	5.1181	200	7.8740	33	1.2992	6600
3L28	73L28	773L28	43L28	-	-	140	5.5118	210	8.2677	33	1.2992	6900
3L30	-	-	-	-	-	150	5.9055	225	8.8583	35	1.3780	7700

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## TYPE 3000 SINGLE ROW — LIGHT SERIES — 3200 Non-Loading Groove

Deep symmetrical uninterrupted pathways. Contains the maximum number and size of balls that can be introduced by eccentric displacement of rings.



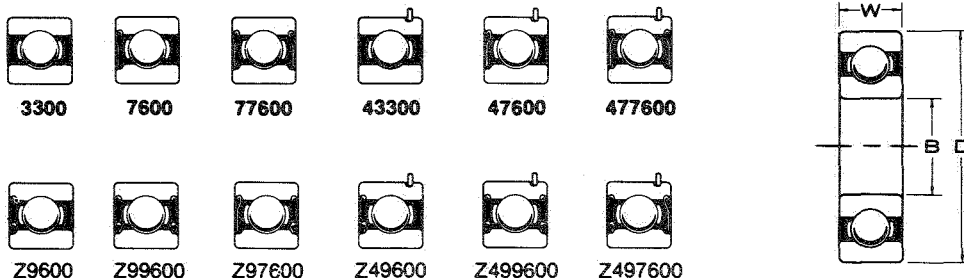
BEARING SIZE NUMBER						Bore B		Diameter D		Width W		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM
Plain 1Z Seal	1 Shield 2Z Seals	2 Shields 1Z Seal 1 Shield	Sn. Ring 1Z Seal	Sn. Ring 1 Shield 2Z Seals	Sn. Ring 2 Shields 1Z Seal 1 Shield	mm	inch	mm	inch	mm	inch	
3200 Z9500	7500 Z99500	77500 Z97500	43200 -	47500 Z499500	477500 Z497500	10	.3937	30	1.1811	9	.3543	320
3201 Z9501	7501 Z99501	77501 Z97501	43201 Z49501	47501 Z499501	477501 Z497501	12	.4724	32	1.2598	10	.3937	320
3202 Z9502	7502 Z99502	77502 Z97502	43202 Z49502	47502 Z499502	477502 Z497502	15	.5906	35	1.3780	11	.4331	350
3203 Z9503	7503 Z99503	77503 Z97503	43203 Z49503	47503 Z499503	477503 -	17	.6693	40	1.5748	12	.4724	570
3204 Z9504	7504 Z99504	77504 Z97504	43204 Z49504	47504 Z499504	477504 Z497504	20	.7874	47	1.8504	14	.5512	760
3205 Z9505	7505 Z99505	77505 Z97505	43205 Z49505	47505 Z499505	477505 Z497505	25	.9843	52	2.0472	15	.5906	820
3206 Z9506	7506 Z99506	77506 Z97506	43206 Z49506	47506 Z499506	477506 Z497506	30	1.1811	62	2.4409	16	.6299	1220
3207 Z9507	7507 Z99507	77507 Z97507	43207 Z49507	47507 Z499507	477507 Z497507	35	1.3780	72	2.8346	17	.6693	1900
3208 Z9508	7508 Z99508	77508 Z97508	43208 Z49508	47508 Z499508	477508 -	40	1.5748	80	3.1496	18	.7087	2100
3209 Z9509	7509 Z99509	77509 Z97509	43209 Z49509	47509 Z499509	477509 -	45	1.7717	85	3.3465	19	.7480	2050
3210 Z9510	7510 Z99510	77510 Z97510	43210 Z49510	47510 Z499510	477510 Z497510	50	1.9685	90	3.5433	20	.7874	2200
3211 Z9511	7511 Z99511	77511 Z97511	43211 Z49511	47511 Z499511	477511 -	55	2.1654	100	3.9370	21	.8268	2700
3212 Z9512	7512 Z99512	77512 Z97512	43212 Z49512	47512 Z499512	477512 Z497512	60	2.3622	110	4.3307	22	.8661	3050
3213 3214	7513 7514	77513 77514	43213 43214	47513 47514	477513 477514	65 70	2.5591 2.7559	120 125	4.7244 4.9213	23 24	.9055 .9449	3600 3850
3215 3216 3217	7515 7516 7517	77515 77516 77517	43215 43216 43217	47515 47516 47517	477515 477516 477517	75 80 85	2.9528 3.1496 3.3465	130 140 150	5.1181 5.5118 5.9055	25 26 28	.9843 1.0236 1.1024	3850 4150 5000
3218 3219	7518 7519	77518 77519	V43218 43219	47518 47519	477518 477519	90 95	3.5433 3.7402	160 170	6.2992 6.6929	30 32	1.1811 1.2598	5600 6200
3220 V3221 Q3222 Q3224 V3224	7520 - 7522 - -	77520 - 77522 - -	43220 V43221 43222 - -	47520 - 47522 - -	- - 477522 - -	100 105 110 120 120	3.9370 4.1339 4.3307 4.7244 4.7244	180 190 200 215 215	7.0866 7.4803 7.8740 8.4646 8.4646	34 36 38 40 40	1.3386 1.4173 1.4961 1.5748 1.5748	6900 7200 7800 8500 8500
3226 3228	- -	- -	- -	- -	- -	130 140	5.1181 5.5118	230 250	9.0551 9.8425	40 42	1.5748 1.6535	9200 10600

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### TYPE 3000 SINGLE ROW — MEDIUM SERIES — 3300

Non Loading Groove

Deep symmetrical uninterrupted pathways. Contains the maximum number and size of balls that can be introduced by eccentric displacement of rings.



BEARING SIZE NUMBER						Bore B		Diameter D		Width W		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM
Plain	1 Shield	2 Shields	Sn. Ring	Sn. Ring	Sn. Ring	mm	inch	mm	inch	mm	inch	
1Z Seal	2Z Seals	1Z Seal 1 Shield	1Z Seal	1 Shield 2Z Seals	2 Shields 1Z Seal 1 Shield							
3300	7600	77600	43300	47600	477600	10	.3937	35	1.3780	11	.4331	425
3301	7601	77601	43301	47601	477601	12	.4724	37	1.4567	12	.4724	550
3302	7602	77602	43302	47602	477602	15	.5906	42	1.6535	13	.5118	690
Z9602	Z99602	Z97602	Z49602	Z499602	Z497602							
3303	7603	77603	43303	47603	477603	17	.6693	47	1.8504	14	.5512	840
Z9603	Z99603	Z97603	Z49603	Z499603	Z497603							
3304	7604	77604	43304	47604	477604	20	.7874	52	2.0472	15	.5906	1200
Z9604	Z99604	Z97604	Z49604	Z499604	Z497604							
3305	7605	77605	43305	47605	477605	25	.9843	62	2.4409	17	.6693	1320
Z9605	Z99605	Z97605	Z49605	Z499605	Z497605							
3306	7606	77606	43306	47606	477606	30	1.1811	72	2.8346	19	.7480	1980
Z9606	Z99606	Z97606	Z49606	Z499606	Z497606							
3307	7607	77607	43307	47607	477607	35	1.3780	80	3.1496	21	.8268	2400
Z9607	Z99607	Z97607	Z49607	Z499607	Z497607							
3308	7608	77608	43308	47608	477608	40	1.5748	90	3.5433	23	.9055	2850
Z9608	Z99608	Z97608	Z49608	Z499608	Z497608							
3309	7609	77609	43309	47609	477609	45	1.7717	100	3.9370	25	.9843	3300
Z9609	Z99609	Z97609	Z49609	Z499609	Z497609							
3310	7610	77610	43310	47610	477610	50	1.9685	110	4.3307	27	1.0630	3550
Z9610	Z99610	Z97610	Z49610	Z499610	Z497610							
3311	7611	77611	43311	47611	477611	55	2.1654	120	4.7244	29	1.1417	4050
3312	7612	77612	43312	47612	477612	60	2.3622	130	5.1181	31	1.2205	4500
3313	7613	77613	43313	47613	477613	65	2.5591	140	5.5118	33	1.2992	5000
3314	7614	77614	43314	47614	477614	70	2.7559	150	5.9055	35	1.3780	5500
3315	7615	77615	43315	47615	477615	75	2.9528	160	6.2992	37	1.4567	5700
3316	7616	77616	43316	47616	477616	80	3.1496	170	6.6929	39	1.5354	6300
3317	7617	77617	43317	47617	477617	85	3.3465	180	7.0866	41	1.6142	6800
3318	7618	77618	-	-	-	90	3.5433	190	7.4803	43	1.6929	7400
3319	-	-	43319	-	-	95	3.7402	200	7.8740	45	1.7717	8500
3320	7620	77620	-	-	-	100	3.9370	215	8.4646	47	1.8504	9100
3322	-	-	-	-	-	110	4.3307	240	9.4488	50	1.9685	10400

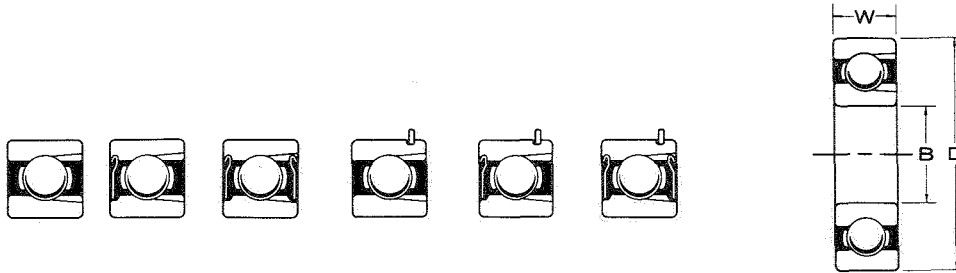


# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## MAXIMUM CAPACITY - TYPE 1000 SINGLE ROW — LIGHT SERIES — 1200

Loading Groove

Contains maximum number and size of balls. Has greatest Radial Capacity obtainable in bearing with one row of balls.



BEARING SIZE NUMBER						Bore B		Diameter D		Width W		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM
Plain	1 Shield	2 Shields	Sn. Ring	Sn. Ring 1 Shield	Sn. Ring 2 Shields	mm	inch	mm	inch	mm	inch	
1206	7206	77206	41206	47206	477206	30	1.1811	62	2.4409	16	.6299	1480
1207	7207	77207	41207	47207	477207	35	1.3780	72	2.8346	17	.6693	2350
1208	7208	77208	41208	47208	477208	40	1.5748	80	3.1496	18	.7087	2450
1209	7209	77209	41209	47209	477209	45	1.7717	85	3.3465	19	.7480	3050
1210	7210	77210	41210	47210	477210	50	1.9685	90	3.5433	20	.7874	3200
1211	7211	77211	41211	47211	477211	55	2.1654	100	3.9370	21	.8268	3350
1212	7212	77212	41212	47212	477212	60	2.3622	110	4.3307	22	.8661	4050
1213	7213	77213	41213	47213	477213	65	2.5591	120	4.7244	23	.9055	4750
1214	7214	77214	41214	47214	477214	70	2.7559	125	4.9213	24	.9449	4750
1215	7215	77215	41215	47215	477215	75	2.9528	130	5.1181	25	.9843	5000
1216	7216	77216	41216	47216	477216	80	3.1496	140	5.5118	26	1.0236	5600
1217	7217	77217	41217	47217	477217	85	3.3465	150	5.9055	28	1.1024	6600
1218	7218	77218	41218	47218	477218	90	3.5433	160	6.2992	30	1.1811	7000
1219	7219	77219	41219	47219	477219	95	3.7402	170	6.6929	32	1.2598	7700
1220	7220	77220	-	-	-	100	3.9370	180	7.0866	34	1.3386	8500
1221	7221	77221	-	-	-	105	4.1339	190	7.4803	36	1.4173	9300
1222	7222	77222	41222	47222	477222	110	4.3307	200	7.8740	38	1.4961	10200
1224	-	-	-	-	-	120	4.7244	215	8.4646	40	1.5748	11000

## SINGLE ROW — MEDIUM SERIES — 1300

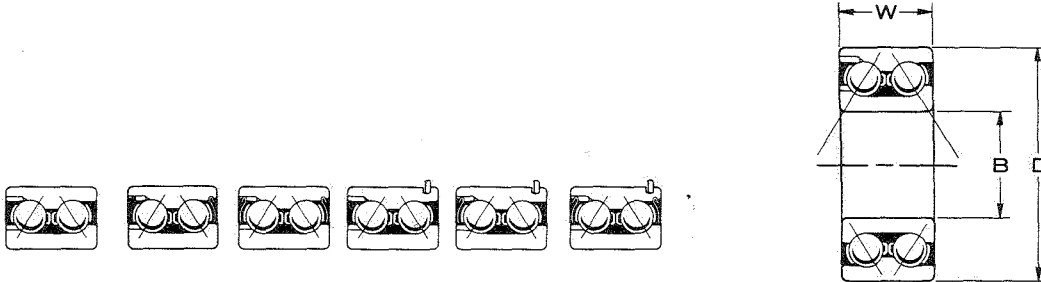
1304	7304	77304	41304	47304	477304	20	.7874	52	2.0472	15	.5906	1440
1305	7305	77305	41305	47305	477305	25	.9843	62	2.4409	17	.6693	1800
1306	7306	77306	41306	47306	477306	30	1.1811	72	2.8346	19	.7480	2550
1307	7307	77307	41307	47307	477307	35	1.3780	80	3.1496	21	.8268	2700
1308	7308	77308	41308	47308	477308	40	1.5748	90	3.5433	23	.9055	3750
1309	7309	77309	41309	47309	477309	45	1.7717	100	3.9370	25	.9843	4400
1310	7310	77310	41310	47310	477310	50	1.9685	110	4.3307	27	1.0630	4750
1311	7311	77311	41311	47311	477311	55	2.1654	120	4.7244	29	1.1417	5400
1312	7312	77312	41312	47312	477312	60	2.3622	130	5.1181	31	1.2205	6000
1313	7313	77313	41313	47313	477313	65	2.5591	140	5.5118	33	1.2992	6600
1314	7314	77314	41314	47314	477314	70	2.7559	150	5.9055	35	1.3780	7300
1315	7315	77315	41315	47315	477315	75	2.9528	160	6.2992	37	1.4567	8100
1316	7316	77316	41316	47316	477316	80	3.1496	170	6.6929	39	1.5354	8800
1317	7317	77317	41317	47317	477317	85	3.3465	180	7.0866	41	1.6142	9500
1318	7318	77318	-	-	-	90	3.5433	190	7.4803	43	1.6929	10400
1319	-	-	-	-	-	95	3.7402	200	7.8740	45	1.7717	11400
1320	-	-	41320	-	-	100	3.9370	215	8.4646	47	1.8504	12000
1321	-	-	-	-	-	105	4.1339	225	8.8583	49	1.9291	13000
1322	-	-	-	-	-	110	4.3307	240	9.4488	50	1.9685	13800

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### DOUBLE ROW — TYPE 5000

"Externally converging angles of contact" used where high rigidity is required to resist overturning deflections effectively.

### LIGHT SERIES — 5200



						Bore B		Diameter D		Width W		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM
Plain	1 Shield	2 Shields	Sn. Ring	Sn. Ring 1 Shield	Sn. Ring 2 Shields	mm	inch	mm	inch	mm	inch	
5200‡	5500‡	55500‡	45200‡	45500‡	455500‡	10	.3937	30	1.1811	14.3	.5625	470
5201‡	5501‡	55501‡	45201‡	45501‡	455501‡	12	.4724	32	1.2598	15.9	.6250	550
•5202‡	5502‡	55502‡	45202‡	45502‡	455502‡	15	.5906	35	1.3780	15.9	.6250	610
•5203‡	5503‡	55503‡	45203‡	45503‡	455503‡	17	.6693	40	1.5748	17.5	.6875	800
•5204‡	5504‡	55504‡	45204‡	45504‡	455504‡	20	.7874	47	1.8504	20.6	.8125	1120
•5205‡	5505‡	55505‡	45205‡	45505‡	455505‡	25	.9843	52	2.0472	20.6	.8125	1220
•5206‡	5506‡	55506‡	45206‡	45506‡	455506‡	30	1.1811	62	2.4409	23.8	.9375	1780
5207‡	5507‡	55507‡	45207‡	45507‡	455507‡	35	1.3780	72	2.8346	27.0	1.0625	2450
5208	5508	55508	45208	45508	455508	40	1.5748	80	3.1496	30.2	1.1875	3350
5209	5509	55509	45209	45509	455509	45	1.7717	85	3.3465	30.2	1.1875	3500
5210	5510	55510	45210	45510	455510	50	1.9685	90	3.5433	30.2	1.1875	3650
5211	5511	55511	45211	45511	455511	55	2.1654	100	3.9370	33.3	1.3125	4650
5212	5512	55512	45212	45512	455512	60	2.3622	110	4.3307	36.5	1.4375	5200
5213	5513	55513	45213	45513	455513	65	2.5591	120	4.7244	38.1	1.5000	6000
5214	5514	55514	45214	45514	455514	70	2.7559	125	4.9213	39.7	1.5625	6500
5215	5515	55515	45215	45515	455515	75	2.9528	130	5.1181	41.3	1.6250	7100
5216	5516	55516	45216	45516	455516	80	3.1496	140	5.5118	44.4	1.7500	7900
5217	5517	55517	45217	-	-	85	3.3465	150	5.9055	49.2	1.9375	9100
5218	5518	55518	45218	-	455518	90	3.5433	160	6.2992	52.4	2.0625	10200
5219	-	-	45219	-	-	95	3.7402	170	6.6929	55.6	2.1875	11400
5220	5520	55520	45220	-	-	100	3.9370	180	7.0866	60.3	2.3750	12600
5222	5522	55522	45222	-	-	110	4.3307	200	7.8740	69.8	2.7500	13600

•For Sentri Seal Double Row Type Check Special Commercial Bearing List. (Z995200)

‡Non-loading groove assembly.

### MEDIUM SERIES — 5300

5300	5600	55600	45300	-	455600	10	.3937	35	1.3780	19.0	.7500	690
5301	5601	55601	-	-	-	12	.4724	37	1.4567	19.0	.7500	750
5302‡	5602‡	55602‡	45302‡	-	-	15	.5906	42	1.6535	19.0	.7500	890
5303‡	5603‡	55603‡	45303‡	45603‡	455603‡	17	.6693	47	1.8504	22.2	.8750	1240
5304‡	5604‡	55604‡	45304‡	45604‡	455604‡	20	.7874	52	2.0472	22.2	.8750	1360
5305‡	5605‡	55605‡	45305‡	45605‡	455605‡	25	.9843	62	2.4409	25.4	1.0000	2100
5306	5606	55606	45306	45606	455606	30	1.1811	72	2.8346	30.2	1.1875	3000
5307	5607	55607	45307	45607	455607	35	1.3780	80	3.1496	34.9	1.3750	3800
5308	5608	55608	45308	45608	455608	40	1.5748	90	3.5433	36.5	1.4375	4500
5309	5609	55609	45309	45609	455609	45	1.7717	100	3.9370	39.7	1.5625	5400
5310	5610	55610	45310	45610	455610	50	1.9685	110	4.3307	44.4	1.7500	6500
5311	5611	55611	45311	45611	-	55	2.1654	120	4.7244	49.2	1.9375	7400
5312	5612	55612	45312	45612	-	60	2.3622	130	5.1181	54.0	2.1250	8800
5313	5613	55613	45313	45613	-	65	2.5591	140	5.5118	58.7	2.3125	9800
5314	-	-	45314	-	-	70	2.7559	150	5.9055	63.5	2.5000	10800
5315	-	-	45315	-	-	75	2.9528	160	6.2992	68.3	2.6875	11200
5316	-	-	45316	-	-	80	3.1496	170	6.6929	68.3	2.6875	12200
5318	-	-	-	-	-	90	3.5433	190	7.4803	73.0	2.8750	14000

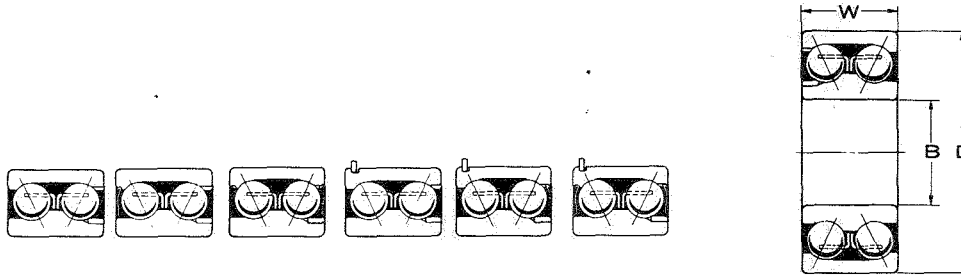
‡Non-loading groove assembly.

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## DOUBLE ROW — TYPE 5000W

With Reverse Angle of Contact — "Externally Diverging Angles of Contact".  
Used where slight misalignment occurs due to heat warping housings, etc. — often used with loose internal fit-up.

## LIGHT SERIES — 5200W



Plain	1 Shield	2 Shields	Snap Ring	Sn. Ring 1 Shield	Sn. Ring 2 Shields	Bore B		Diameter D		Width W		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM
						mm	inch	mm	inch	mm	inch	
5205W	-	-	45205W	-	-	25	.9843	52	2.0472	20.6	.8125	1480
5206W	5506W	55506W	45206W	-	455506W	30	1.1811	62	2.4409	23.8	.9375	1900
5207W	5507W	55507W	45207W	45507W	455507W	35	1.3780	72	2.8346	27.0	1.0625	2850
5208W	-	-	45208W	-	-	40	1.5748	80	3.1496	30.2	1.1875	3350
5210W	5510W	55510W	45210W	-	-	50	1.9685	90	3.5433	30.2	1.1875	3650
5211W	5511W	-	45211W	-	-	55	2.1654	100	3.9370	33.3	1.3125	4650
5212W	-	-	45212W	-	-	60	2.3622	110	4.3307	36.5	1.4375	5200
5213W	5513W	55513W	45213W	-	-	65	2.5591	120	4.7244	38.1	1.5000	6000
5214W	-	-	45214W	-	-	70	2.7559	125	4.9213	39.7	1.5625	6500
5215W	-	-	45215W	-	-	75	2.9528	130	5.1181	41.3	1.6250	7100
5216W	5516W	-	-	-	-	80	3.1496	140	5.5118	44.4	1.7500	7900
5218W	5518W	-	45218W	-	-	90	3.5433	160	6.2992	52.4	2.0625	10200
5222W	-	-	-	-	-	110	4.3307	200	7.8740	69.8	2.7500	15000

## MEDIUM SERIES — 5300W

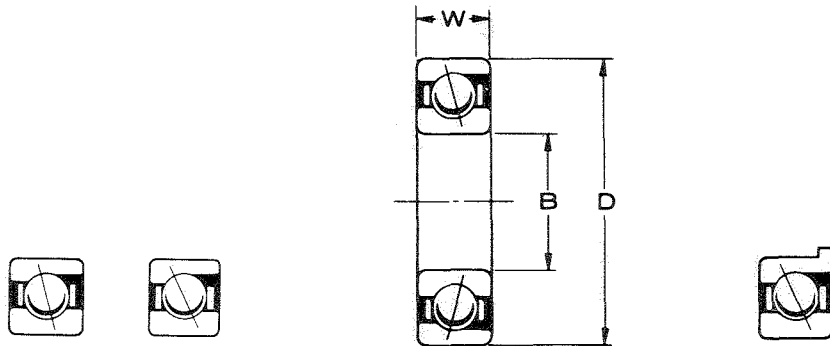
5305W	-	-	45305W	-	-	25	.9843	62	2.4409	25.4	1.0000	2200
5306W	5606W	55606W	45306W	45606W	-	30	1.1811	72	2.8346	30.2	1.1875	3200
5307W	5607W	-	45307W	-	-	35	1.3780	80	3.1496	34.9	1.3750	3800
5308W	5608W	-	45308W	45608W	-	40	1.5748	90	3.5433	36.5	1.4375	4500
5309W	5609W	-	45309W	45609W	455609W	45	1.7717	100	3.9370	39.7	1.5625	5400
5310W	5610W	55610W	45310W	-	-	50	1.9685	110	4.3307	44.4	1.7500	6500
5311W	5611W	-	45311W	-	-	55	2.1654	120	4.7244	49.2	1.9375	7400
5312W	5612W	-	45312W	-	-	60	2.3622	130	5.1181	54.0	2.1250	8800
5313W	-	-	45313W	-	-	65	2.5591	140	5.5118	58.7	2.3125	9800

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### ANGULAR CONTACT TYPE

### SINGLE ROW — EXTRA LIGHT SERIES — 0L00

Sold singly without DT grind. Also manufactured singly with duplex DT grind for universal DB, DF or DT mounting (old U prefix). DT bearings may be ordered in matched **pairs** or **sets** by so specifying.



Bearing Size No.	Bearing Size No.	Bore B		Diameter D		Width W		Bearing Size No. †	Flange		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM*	
									O. D.	Width		
15° Contact Angle	25° Contact Angle	mm	inch	mm	inch	mm	inch	Flanged	inch	inch	0L00	H0L00
0L00	H0L00	10	.3937	26	1.0236	8	.3150	-	-	-	245	230
0L01	H0L01	12	.4724	28	1.1024	8	.3150	-	-	-	265	250
0L02	H0L02	15	.5906	32	1.2598	9	.3543	-	-	-	305	285
0L03	H0L03	17	.6693	35	1.3780	10	.3937	-	-	-	325	305
**0L04	**H0L04	20	.7874	42	1.6535	12	.4724	-	-	-	**570	**530
0L05	H0L05	25	.9843	47	1.8504	12	.4724	N0L05	1.9685	.118	640	600
0L06	H0L06	30	1.1811	55	2.1654	13	.5118	N0L06	2.2932	.128	860	810
0L07	H0L07	35	1.3780	62	2.4409	14	.5512	N0L07	2.5787	.138	1140	1060
0L08	H0L08	40	1.5748	68	2.6772	15	.5906	N0L08	2.8150	.148	1180	1120
0L09	H0L09	45	1.7717	75	2.9528	16	.6299	N0L09	3.1102	.157	1520	1420
0L10	H0L10	50	1.9685	80	3.1496	16	.6299	N0L10	3.3071	.157	1580	1480
0L11	H0L11	55	2.1654	90	3.5433	18	.7087	N0L11	3.7205	.177	2150	2050
0L12	H0L12	60	2.3622	95	3.7402	18	.7087	N0L12	3.9173	.177	2350	2200
0L13	H0L13	65	2.5591	100	3.9370	18	.7087	N0L13	4.1142	.177	2400	2250
0L14	H0L14	70	2.7559	110	4.3307	20	.7874	N0L14	4.5276	.197	3200	3000
0L15	H0L15	75	2.9528	115	4.5276	20	.7874	N0L15	4.7244	.197	3350	3100
0L16	H0L16	80	3.1496	125	4.9213	22	.8661	N0L16	5.1378	.216	4000	3750
0L17	H0L17	85	3.3465	130	5.1181	22	.8661	N0L17	5.3346	.216	4100	3850
0L18	H0L18	90	3.5433	140	5.5118	24	.9449	N0L18	5.7480	.236	4800	4500
0L19	H0L19	95	3.7402	145	5.7087	24	.9449	N0L19	5.9450	.236	4950	4650
0L20	H0L20	100	3.9370	150	5.9055	24	.9449	-	-	-	5100	4800
0L21	-	105	4.1339	160	6.2992	26	1.0236	N0L21	6.5551	.256	5800	-
0L22	H0L22	110	4.3307	170	6.6929	28	1.1024	N0L22	6.9685	.276	6600	6100
0L24	H0L24	120	4.7244	180	7.0866	28	1.1024	N0L24	7.3622	.276	6800	6400
0L26	H0L26	130	5.1181	200	7.8740	33	1.2992	N0L26	8.1988	.325	8100	7600
0L28	H0L28	140	5.5118	210	8.2677	33	1.2992	N0L28	8.8125	.312	8300	7800
0L30	-	150	5.9055	225	8.8583	35	1.3780	-	-	-	9300	-
0L36	-	180	7.0866	280	11.0236	46	1.8110	-	-	-	12800	-

\*Radial Capacity for two bearings mounted duplex may be taken as 1.62 times rating listed.

\*\*Q0L04 & QH0L04 have fewer balls and are rated as follows: Q0L04-530 & QH0L04-495.

†Flanged Precision Bearings — Type N0L00 manufactured to A.B.E.C. 5, 7, 9 precision specifications only.

Check availability by size.

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## ANGULAR CONTACT TYPE - Cont'd SINGLE ROW — LIGHT SERIES — 20200 AND 30200

Sold singly without DT grind. Also manufactured singly with duplex DT grind for universal DB, DF or DT mounting (old U prefix). DT bearings may be ordered in matched pairs or sets by so specifying.



Bearing Size No.			Bore B		Diameter D		Width W		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM*		
15° Contact Angle †	25° Contact Angle †	35° Contact Angle †	mm	inch	mm	inch	mm	inch	20200 Series	H20200 Series	30200 Series
20200	H20200	-	10	.3937	30	1.1811	9	.3543	265	250	-
20201	H20201	-	12	.4724	32	1.2598	10	.3937	370	345	-
20202	H20202	-	15	.5906	35	1.3780	11	.4331	395	370	-
20203	H20203	30203‡	17	.6693	40	1.5748	12	.4724	530	495	475
20204	H20204	30204	20	.7874	47	1.8504	14	.5512	730	690	880
20205	H20205	30205	25	.9843	52	2.0472	15	.5906	780	730	950
20206	H20206	30206	30	1.1811	62	2.4409	16	.6299	1440	1340	1220
20207	H20207	30207	35	1.3780	72	2.8346	17	.6693	1960	1840	1660
20208	H20208	30208	40	1.5748	80	3.1496	18	.7087	2400	2250	2100
20209	H20209	30209	45	1.7717	85	3.3465	19	.7480	2500	2350	2250
20210	H20210	30210	50	1.9685	90	3.5433	20	.7874	3100	2900	2350
20211	H20211	30211	55	2.1654	100	3.9370	21	.8268	3250	3050	2900
20212	H20212	30212	60	2.3622	110	4.3307	22	.8661	3900	3700	3450
20213	H20213	30213	65	2.5591	120	4.7244	23	.9055	4600	4300	4000
20214	H20214	30214	70	2.7559	125	4.9213	24	.9449	4600	4300	4200
20215	H20215	30215	75	2.9528	130	5.1181	25	.9843	4800	4500	4400
20216	-	30216	80	3.1496	140	5.5118	26	1.0236	5400	-	5100
20217	-	30217	85	3.3465	150	5.9055	28	1.1024	6300	-	5400
20218	-	30218	90	3.5433	160	6.2992	30	1.1811	6700	-	6000
20219	-	30219	95	3.7402	170	6.6929	32	1.2598	7500	-	6700
20220	-	30220	100	3.9370	180	7.0866	34	1.3386	8200	-	7300
20221	H20221	30221	105	4.1339	190	7.4803	36	1.4173	9000	8400	8000
20222	H20222	30222	110	4.3307	200	7.8740	38	1.4961	9800	9200	8600
20224	-	-	120	4.7244	215	8.4646	40	1.5748	10600	-	-
20226	-	30226	130	5.1181	230	9.0551	40	1.5748	11600	-	10600
20228	-	30228	140	5.5118	250	9.8425	42	1.6535	13400	-	11400
20230	H20230	-	150	5.9055	270	10.6299	45	1.7717	14800	14000	-

†Flanged Precision Bearings manufactured to A.B.E.C. 5, 7, 9 precision specifications only. Check availability by size.  
‡30° Contact angle.

## SINGLE ROW — MEDIUM SERIES — H20300 AND 30300

25° Contact Angle	35° Contact Angle	Bore B		Diameter D		Width W		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM*	
		mm	inch	mm	inch	mm	inch	H20300 Series	30300 Series
H20300	-	10	.3937	35	1.3780	11	.4331	425	-
H20301	-	12	.4724	37	1.4567	12	.4724	460	-
H20302	-	15	.5906	42	1.6535	13	.5118	640	-
H20303	-	17	.6693	47	1.8504	14	.5512	800	-
H20304	30304	20	.7874	52	2.0472	15	.5906	1300	1080
H20305	30305	25	.9843	62	2.4409	17	.6693	1620	1460
H20306	30306	30	1.1811	72	2.8346	19	.7480	1980	1860
H20307	30307	35	1.3780	80	3.1496	21	.8268	2450	2450
H20308	30308	40	1.5748	90	3.5433	23	.9055	2950	2900
H20309	30309	45	1.7717	100	3.9370	25	.9843	3700	3400
H20310	30310	50	1.9685	110	4.3307	27	1.0630	4300	3900
H20311	30311	55	2.1654	120	4.7244	29	1.1417	4850	4650
H20312	30312	60	2.3622	130	5.1181	31	1.2205	5400	5200
H20313	30313	65	2.5591	140	5.5118	33	1.2992	6000	5700
H20314	30314	70	2.7559	150	5.9055	35	1.3780	6600	6200
H20315	30315	75	2.9528	160	6.2992	37	1.4567	7300	6800
H20316	30316	80	3.1496	170	6.6929	39	1.5354	8000	7400
H20317	30317	85	3.3465	180	7.0866	41	1.6142	8600	8000
H20318	30318	90	3.5433	190	7.4803	43	1.6929	9400	8600
H20319	30319	95	3.7402	200	7.8740	45	1.7717	10200	9300
-	30320	100	3.9370	215	8.4646	47	1.8504	-	10600
-	30321	105	4.1339	225	8.8583	49	1.9291	-	11200
-	30322	110	4.3307	240	9.4488	50	1.9685	-	12800
-	30326	130	5.1181	280	11.0236	58	2.2835	-	15800

\*Radial Capacity for two bearings mounted duplex may be taken as 1.62 times rating listed.

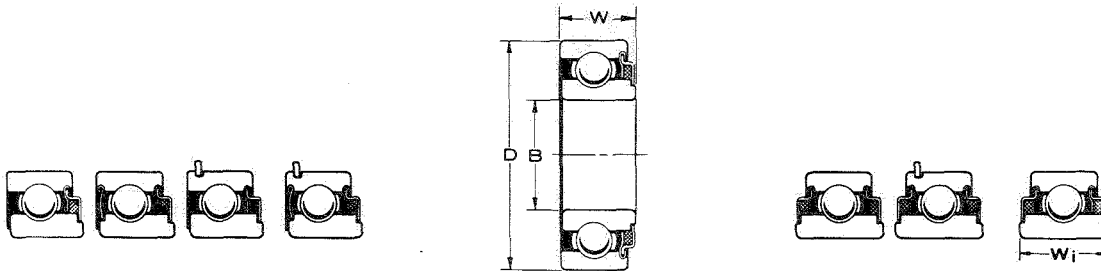
## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### 8000 SEAL TYPES

For radial or combined loads in either direction. Self-contained seal. Furnished completely lubricated, ready for service. If Snap Ring is desired on same side as seal, indicate with suffix "V," otherwise will be furnished on side opposite from seal as illustrated below.

**NOTE:** If seal bearing to be replaced is standard Single Row Width, see pages 3 to 6 for Z9000, Z99000 and Z97000 Series.

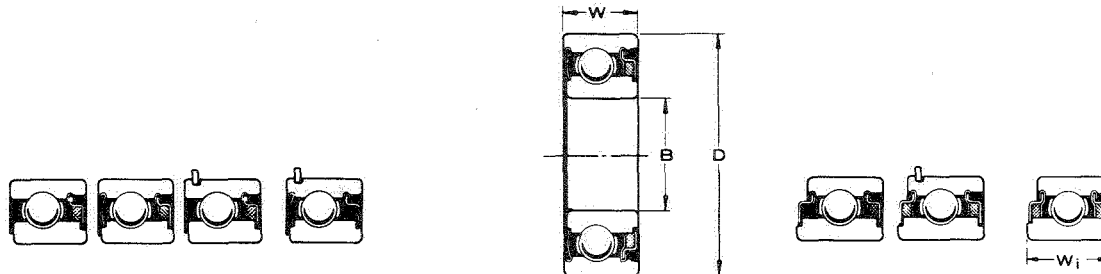
### 8000 ND SEAL BEARINGS (Without "WC" Prefix)



### "WC" PREFIX — WIDE CUP ND SEAL — WC-8000

Over-all dimension same as 8000 Series — Outer ring is extended to be flush with inner ring on one face.

Available in sizes underlined as "WC".



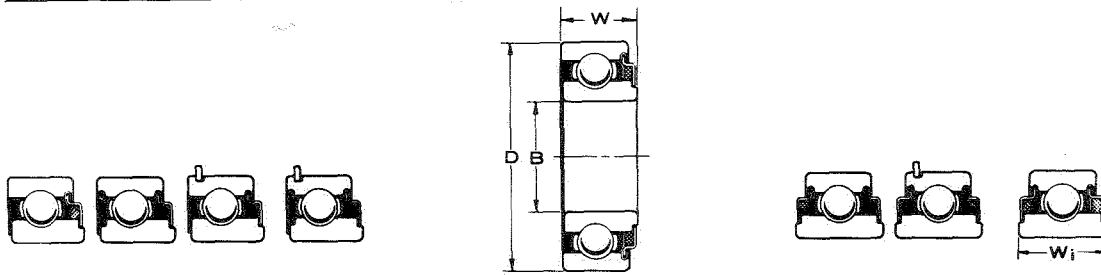
BEARING SIZE NUMBER				Bore B		Diameter D		Width W		BEARING SIZE NO.		Width W <sub>i</sub>		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM
One Seal	Shield & Seal	Sn. Ring 1 Seal	Sn. Ring Sh. & Sl.	mm	inch	mm	inch	mm	inch	Double Seal	Sn. Ring 2 Seals	mm	inch	
<u>8006</u>	<u>87006</u>	-	-	6	.2362	24	.9449	10.3	.406	<u>88006</u>	-	12.62	.4970	132
<u>8007</u>	<u>87007</u>	-	-	7	.2756	24	.9449	10.3	.406	<u>88007</u>	-	12.62	.4970	132
<u>8008</u>	<u>87008</u>	-	-	8	.3150	24	.9449	10.3	.406	<u>88008</u>	-	12.62	.4970	132
<u>8009</u>	<u>87009</u>	-	<u>487009</u>	9	.3543	30	1.1811	12.699	.500	<u>88009</u>	<u>488009</u>	16.40	.6457	320
<u>8011</u>	<u>87011</u>	-	-	11	.4331	32	1.2598	12.699	.500	<u>88011</u>	<u>488011</u>	15.40	.6063	320
<u>8013</u>	<u>87013</u>	<u>48013</u>	<u>487013</u>	13	.5118	32	1.2598	12.699	.500	<u>88013</u>	<u>488013</u>	15.40	.6063	320
<u>8014</u>	<u>87014</u>	-	<u>487014</u>	14	.5512	35	1.3780	12.699	.500	<u>88014</u>	<u>488014</u>	14.40	.5669	350
<u>8016</u>	<u>87016</u>	<u>48016</u>	<u>487016</u>	16	.6299	35	1.3780	12.699	.500	<u>88016</u>	<u>488016</u>	14.40	.5669	350
<u>8026</u>	<u>87026</u>	<u>48026</u>	<u>487026</u>	26	1.0236	52	2.0472	15.87	.625	<u>88026</u>	<u>488026</u>	16.75	.6594	820
<u>8035</u>	<u>87035</u>	-	-	5	.1969	19	.7480	10.3	.406	<u>88035</u>	-	12.6	.4970	117
<u>8036</u>	<u>87036</u>	-	-	6	.2362	19	.7480	10.3	.406	<u>88036</u>	-	12.6	.4970	117
<u>8037</u>	<u>87037</u>	-	-	7	.2756	22	.8661	10.3	.406	<u>88037</u>	-	12.6	.4970	157
<u>8038</u>	<u>87038</u>	-	-	8	.3150	22	.8661	10.3	.406	<u>88038</u>	-	12.6	.4970	157
<u>8039</u>	<u>87039</u>	-	-	9	.3543	26	1.0236	10.3	.406	<u>88039</u>	-	12.6	.4970	230

**C-Prefix**

All the above sizes of ND seal bearings are available with metal slingers ("C" prefix), desirable where minimum seal friction is needed.

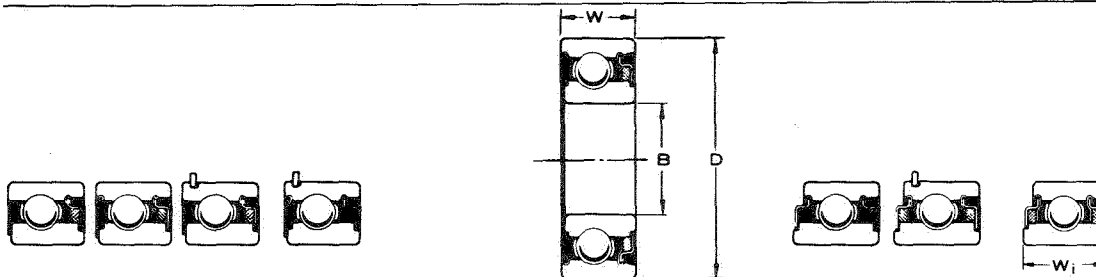
**8000 SEAL TYPES - Cont'd**

**8000 ND SEAL BEARINGS (Without "WC" Prefix) — Cont'd**



**"WC" PREFIX — WIDE CUP ND SEAL — WC-8000 — Cont'd**

Over-all dimension same as 8000 Series — Outer ring is extended to be flush with inner ring on one face.  
Available in sizes underlined as "WC".



BEARING SIZE NUMBER				Bore B		Diameter D		Width W		BEARING SIZE NO.		Width W <sub>i</sub>		Radial Capacity Based on 3000 Hrs. B-10 Life at 500 RPM
One Seal	Shield & Seal	Sn. Ring 1 Seal	Sn. Ring Sh. & Sl.	mm	inch	mm	inch	mm	inch	Double Seal	Sn. Ring 2 Seals	mm	inch	
<u>8500</u>	<u>87500</u>	-	<u>487500</u>	10	.3937	30	1.1811	12.699	.500	<u>88500</u>	<u>488500</u>	16.4	.6457	320
<u>8501</u>	<u>87501</u>	48501	<u>487501</u>	12	.4724	32	1.2598	12.699	.500	<u>88501</u>	<u>488501</u>	15.4	.6063	320
<u>8502</u>	<u>87502</u>	-	<u>487502</u>	15	.5906	35	1.3780	12.699	.500	<u>88502</u>	<u>488502</u>	14.4	.5669	350
<u>8503</u>	<u>87503</u>	48503	<u>487503</u>	17	.6693	40	1.5748	14.299	.563	<u>88503</u>	<u>488503</u>	16.6	.6536	600
<u>8504</u>	<u>87504</u>	48504	<u>487504</u>	20	.7874	47	1.8504	15.87	.625	<u>88504</u>	<u>488504</u>	17.8	.6988	760
<u>8505</u>	<u>87505</u>	48505	<u>487505</u>	25	.9843	52	2.0472	15.87	.625	<u>88505</u>	<u>488505</u>	16.8	.6594	820
<u>8506</u>	<u>87506</u>	48506	<u>487506</u>	30	1.1811	62	2.4409	19.989	.787	<u>88506</u>	<u>488506</u>	24	.9449	1220
<u>8507</u>	<u>87507</u>	48507	<u>487507</u>	35	1.3780	72	2.8346	21	.827	<u>88507</u>	<u>488507</u>	25	.9843	1900
<u>8508</u>	<u>87508</u>	48508	<u>487508</u>	40	1.5748	80	3.1496	21	.827	<u>88508</u>	<u>488508</u>	27	1.0630	2100
<u>8509</u>	<u>87509</u>	-	-	45	1.7717	85	3.3465	25	.945	<u>88509</u>	<u>488509</u>	27	1.0630	2050
<u>8510</u>	<u>87510</u>	-	<u>487510</u>	50	1.9685	90	3.5433	26	1.024	<u>88510</u>	<u>488510</u>	30	1.1811	2200
<u>8511</u>	<u>87511</u>	-	-	55	2.1654	100	3.9370	27	1.063	<u>88511</u>	-	31	1.2205	2700
<u>8512</u>	<u>87512</u>	-	-	60	2.3622	110	4.3307	29	1.142	<u>88512</u>	-	33	1.2992	3050
<u>8513</u>	<u>87513</u>	-	-	65	2.5591	120	4.7244	31	1.221	<u>88513</u>	<u>488513</u>	36	1.4173	3600
<u>8514</u>	<u>87514</u>	-	-	70	2.7559	125	4.9213	31.2	1.299	-	-	-	-	3850

Above sizes bores 00 thru 08 and 11 of ND seal bearings are available with metal slingers "C" prefix.

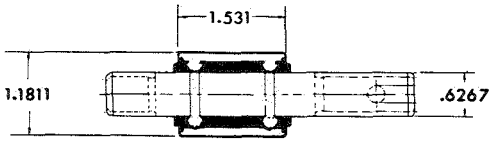
<u>8602</u>	<u>87602</u>	-	-	15	.5906	42	1.6535	15	.591	<u>88602</u>	<u>488602</u>	17	.6693	600
<u>8603</u>	<u>87603</u>	-	<u>487603</u>	17	.6693	47	1.8504	16	.630	<u>88603</u>	<u>488603</u>	18	.7087	840
<u>8604</u>	<u>87604</u>	<u>48604</u>	-	20	.7874	52	2.0472	19	.748	<u>88604</u>	<u>488604</u>	23	.9055	1200
<u>8605</u>	<u>87605</u>	<u>48605</u>	<u>487605</u>	25	.9843	62	2.4409	21	.827	<u>88605</u>	<u>488605</u>	25	.9843	1320
<u>8606</u>	<u>87606</u>	<u>48606</u>	-	30	1.1811	72	2.8346	23	.906	<u>88606</u>	<u>488606</u>	27	1.0630	1760
<u>8607</u>	<u>87607</u>	<u>48607</u>	-	35	1.3780	80	3.1496	25	.984	<u>88607</u>	<u>488607</u>	29	1.1417	2150
<u>8608</u>	<u>87608</u>	-	-	40	1.5748	90	3.5433	27	1.063	<u>88608</u>	<u>488608</u>	31	1.2205	2600
<u>8609</u>	<u>87609</u>	-	<u>487609</u>	45	1.7717	100	3.9370	30	1.1811	<u>88609</u>	<u>488609</u>	35	1.3780	3300

Above size bores 03 thru 06 of ND seal bearings are available with metal slingers "C" prefix.

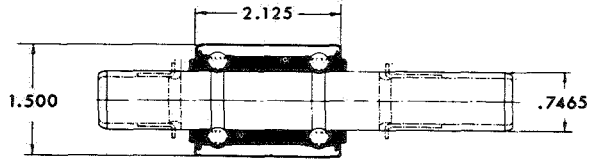
Underlined numbers available in "WC" 8000 Series.

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## INTEGRAL SHAFT BEARING

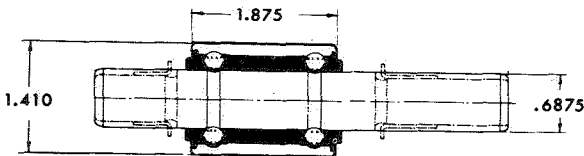


**Standard Type 88P100 and 88P200**  
\*205 lbs.

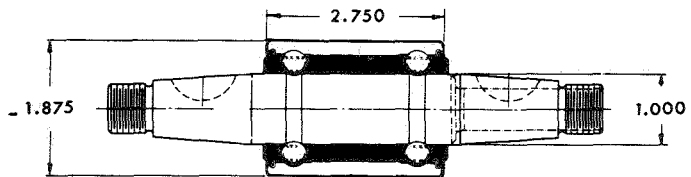


**Medium Duty Type 88P800**  
\*395 lbs.

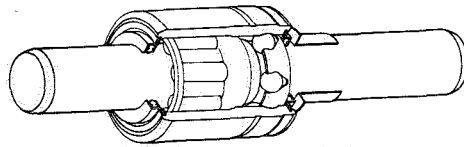
**NOTE:** "P" replaces double row designator "5".  
\*Radial Capacity Per Row at 500 RPM for 3000 hours B-10 life.



**Intermediate Type 88P500**  
\*395 lbs.

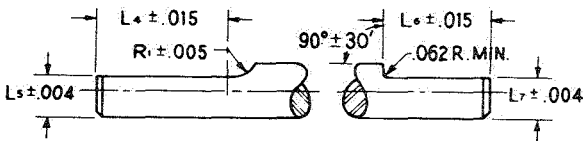


**Heavy Duty Type 88P900**  
\*580 lbs.

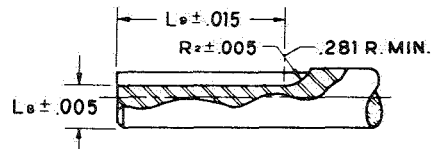


**Ball-Roller Type RP100**  
\*960 lbs.

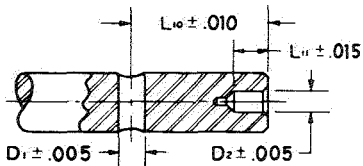
## Typical Shaft Specialties



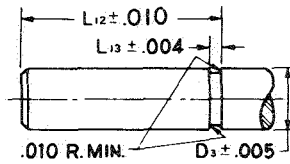
**Flat**



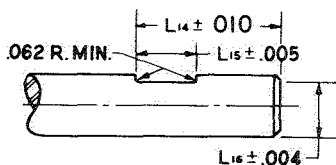
**Keyway**



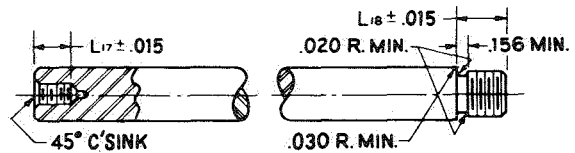
**Hole**



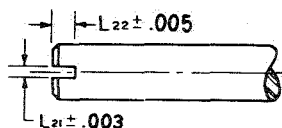
**Snap Ring Groove**



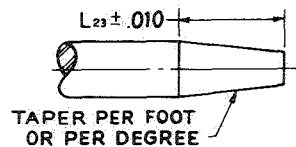
**Notch**



**Thread**



**Slot**



**Taper**  
TAPER PER FOOT  
OR PER DEGREE



**INTEGRAL SHAFT BEARINGS**

The purpose of this index is for basic reference only. For complete bearing dimensions and supplementary data, consult your NDH Bearing Sales Engineer.

Dimensions Listed: A - Overall Shaft length  
B - Short end  
C - Long end

Basic* Bearing Number	100 Series		
	A	B	C
RP100	4.869	1.250	2.088
100D	4.860	1.250	2.079
RP100F	4.869	1.250	2.088
RP100G	4.869	1.250	2.088
101A	4.900	1.300	2.069
102C	4.412	1.129	1.752
103B	4.656	.578	2.547
105	4.760	1.160	2.069
105A	4.760	1.160	2.069
106	4.170	.159	2.480
107B	4.312	.578	2.203
108	4.828	1.578	1.719
111B	4.281	1.078	1.672
113B	5.270	1.679	2.060
117	6.375	2.300	2.544
177B	6.375	2.300	2.544
120	3.188	.719	.938
123C	3.529	.837	1.161
130	3.921	1.015	1.375
140	4.062	.922	1.609
140AA	4.162	1.022	1.609
141	5.031	1.016	2.484
144A	5.625	1.578	2.516
144FS	5.625	1.578	2.516
144PS	5.625	1.578	2.516
146	4.516	.157	2.828
151B	5.031	1.750	1.750
151D	5.031	1.750	1.750
151E	3.850	.163	2.156
151K	5.031	1.750	1.750
154	2.890	.156	1.203
154A	2.890	.156	1.203
154B	2.890	.156	1.203
154C	2.890	.156	1.203
155	4.453	1.250	1.672
155E	4.453	1.250	1.672
156	4.469	1.079	1.859
158D	5.438	1.610	2.297
158H	5.438	1.610	2.297
158K	5.406	1.250	2.625
160	4.125	.578	2.016
165	3.250	.157	1.562
165A	3.250	.157	1.562
165C	3.250	.157	1.562
167	4.390	.935	1.925
167D	4.400	1.151	1.718
167J	4.400	1.151	1.718
167S	4.390	.935	1.925
195A	6.969	2.300	3.138
195B	6.969	2.300	3.138
198	2.720	.160	1.029
198AF	2.400	.156	.713
203	3.234	.141	1.562

Basic* Bearing Number	100 Series Cont'd.		
	A	B	C
204A	4.798	1.470	1.797
206	5.500	1.820	2.149
207	3.250	.157	1.562
208A	4.798	1.467	1.800
209A	5.310	1.800	1.979
210	4.700	1.564	1.605
211	5.484	1.380	2.573
212	4.270	.939	1.800
214	2.910	.439	.940
215	5.200	1.690	1.979
216A	2.656	-	1.125
221	4.720	1.440	1.750
222	4.750	1.500	1.718
228	6.485	2.300	2.654
229	5.530	1.820	2.179
230	3.300	.507	1.262
231	4.312	.578	2.203
243	3.715	-	2.184
244	3.888	-	2.357
245	4.898	1.570	1.797
245B	4.898	1.570	1.797
246	3.625	.157	1.937
253	4.760	.990	2.239
254	5.500	1.669	2.300
255	4.810	.159	3.120
256A	2.938	.157	1.250
257	4.890	1.624	1.735

Basic* Bearing Number	500 Series		
	A	B	C
500A	3.680	-	1.805

Basic* Bearing Number	800 Series		
	A	B	C
800A	4.300	.140	2.035
801B	5.870	1.640	2.105
802B	5.750	1.750	1.875
802E	5.875	1.750	2.000
803	3.578	.141	1.312
803A	3.578	.141	1.312
804	5.250	.953	2.172
807	6.040	1.800	2.115
808	5.812	1.343	2.344
811	5.000	1.235	1.640

Basic* Bearing Number	800 Series - cont'd.		
	A	B	C
820	6.625	2.000	2.500
821	5.500	1.400	1.975
822A	3.875	.406	1.344
823	3.305	.140	1.040
825	4.750	1.313	1.812
826	5.020	1.215	1.680
828A	5.425	1.650	1.650
830	3.970	.140	1.705
832	4.950	1.215	1.610
832A	4.950	1.215	1.610
838	6.562	1.812	2.625
841	4.436	1.126	1.685
844	6.000	1.400	2.475
844A	6.000	1.400	2.475
845	6.780	1.195	3.460
850	5.600	1.500	1.975
851A	5.605	1.555	1.925
852	5.200	1.175	1.900
852A	5.200	1.175	1.900
854	6.500	1.400	2.975
854A	6.500	1.400	2.975
856	2.500	.188	.188
858	6.375	1.400	2.850
859A	4.960	1.205	1.630
860A	5.862	1.630	2.107
861	4.750	1.313	1.812
862	5.649	1.214	2.310
862A	5.649	1.214	2.310
864	5.649	1.214	2.310
864A	5.649	1.214	2.310
865	6.020	1.825	2.070
866A	5.000	1.050	1.825
868	5.382	1.332	1.925
869	5.019	1.222	1.672
870	5.382	1.585	1.672

Basic* Bearing Number	900 Series		
	A	B	C
900	7.015	2.105	2.160
900A	6.990	2.120	2.120
900B	4.219	-	1.469
900C	6.400	1.640	2.010
902A	7.062	1.188	3.124
903	7.060	1.186	3.124
905	6.875	1.500	2.625
907	6.298	1.781	1.767
909	7.000	2.000	2.250
910	7.125	1.930	2.445

\* Does not include prefix for seals.

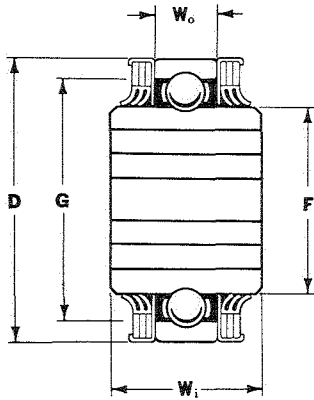
# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## BEARINGS EXTENSIVELY USED ON AGRICULTURAL EQUIPMENT

### HEAVY DUTY DISC HARROW BEARINGS — CYLINDRICAL O.D.

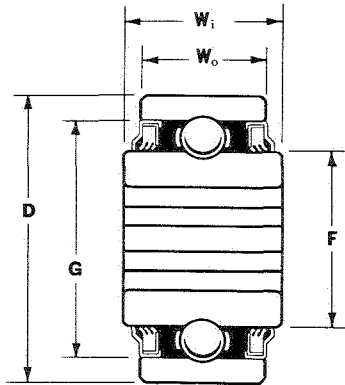
#### TYPE 1

This bearing is made with a narrow outer ring and wide inner ring. The inner ring provides a very hard finely finished land for the triple-lip seals. Bearing is supplied with or without seals. The seals shown are designed for press fitting in housing bore.



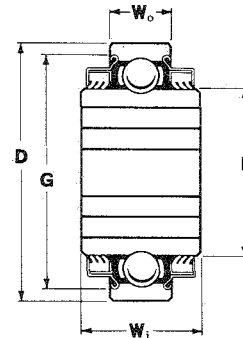
#### TYPE 2

This bearing is made with wide inner and outer rings and two Armor-Gard 3L Seals. While usually supplied as a double sealed bearing, it is also available with a single seal. This is for designs where two bearings are mounted in a common housing.



#### TYPE 3

This bearing is made with a narrow outer ring and wide inner ring. It incorporates two Crimped-in Armor-Gard 3L Seals



#### ROUND BORE

type	bearing number		shaft size		outside diameter D		ring widths		F	G	radial capacity based on 3000 hrs. B-10 life	
	sealed	open	nominal	max.	max.	min.	inner Wi	outer Wo			@100 rpm	@500 rpm
3 *	<b>AS4508E</b>	—	1½	1.500	3.1496	3.1491	1.062	.7087	2.066	2.801	3140	2100
2	<b>AS4508ED</b>	—	1½	1.525	3.150	3.149	1.438	1.188	2.058	2.675	2150	1440
1	—	<b>3210B</b>	1½ <sup>5</sup> / <sub>16</sub>	1.9375	3.5433	3.5423	1.938	.7874	2.474	3.072	3290	2200

\*Single seal, flush on non-seal side

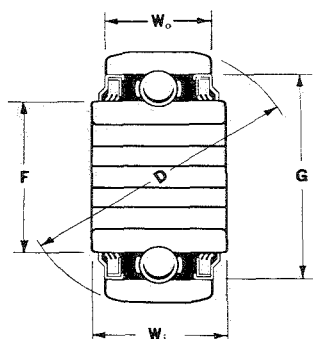
#### SQUARE BORE

type	bearing number		shaft size		outside diameter D		ring widths		F	G	radial capacity based on 3000 hrs. B-10 life	
	sealed	open	nominal	max.	max.	min.	inner Wi	outer Wo			@100 rpm	@500 rpm
1	<b>AS4508A</b>	<b>4508A</b>	1	1.025	3.1496	3.1486	1.688	.7087	2.058	2.675	2150	1440
2	<b>AS4508AD</b>	—	1	1.025	3.150	3.149	1.438	1.188	2.058	2.675	2150	1440
1	<b>AS4508B</b>	<b>4508B</b>	1 <sup>1</sup> / <sub>8</sub>	1.175	3.1496	3.1486	1.688	.7087	2.058	2.675	2150	1440
2	<b>AS4508BD</b>	—	1 <sup>1</sup> / <sub>8</sub>	1.175	3.150	3.149	1.438	1.188	2.058	2.675	2150	1440
3	<b>AS4508BH</b>	—	1 <sup>1</sup> / <sub>8</sub>	1.175	3.1496	3.1491	1.438	.7087	2.058	2.801	2150	1440
2	<b>AS4510B</b>	—	1 <sup>1</sup> / <sub>8</sub>	1.175	3.5433	3.5423	1.188	1.188	2.514	3.071	2480	1660
2	<b>AS4511AE</b>	—	1½	1.526	4.0000	3.9990	1.750	1.438	2.777	3.409	4260	2040
2	<b>AS4511BD</b>	—	1½	1.526	3.9370	3.9364	1.313	1.313	2.777	3.409	4260	2040
2	<b>AS4511D</b>	—	1½	1.526	4.0000	3.9990	1.750	1.438	2.777	3.409	4260	2040

**HEAVY DUTY DISC HARROW BEARINGS — SPHERICAL O.D.**

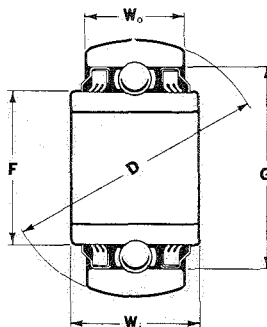
**TYPE 1**

This bearing incorporates a machined spherical outside diameter that is interrupted by a cylindrically ground crown. (This cylindrical portion is for manufacturing purposes only) Armor-Gard 3L seals are standard for this type. It has an extra heavy outer ring section which was specially designed for mounting in stamped flanges. All bearings of this type except AS4511AC may be mounted in NDH FL-87 stamped flanges.



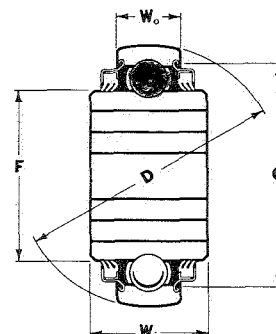
**TYPE 2**

This bearing incorporates a fully ground spherical outside diameter and Armor-Gard 3L seals. It is suitable for mounting either in pillow blocks or standard stamped flanges.



**TYPE 3**

This bearing also incorporates a fully ground spherical outside diameter. However, its outer ring is much narrower than Type 2. Crimped-in Armor Gard 3L seals are standard for this type. They are suitable for mounting either in pillow blocks or standard stamped flanges.



**ROUND BORE**

type	bearing number	shaft size		outside diameter D		ring widths		F	G	stamped flange number	radial capacity based on 3000 hrs. B-10 life		
		sealed	nominal	max.	max.	min.	inner W <sub>i</sub>				outer W <sub>o</sub>	@100 rpm	@500 rpm
2	AS4504A		3/4	.750	1.853	1.847	1.344	.690	1.085	1.530	FL47	1135	760
3	4505B		3/4	.750	2.050	2.044	1.375	.5906	1.354	1.810	FL52	1225	820
1	AS4508FD		7/8	.880	3.443	3.433	1.438	1.188	2.058	2.675	FL87	2150	1440
1	AS4508EC		1 1/2	1.525	3.443	3.433	1.438	1.188	2.058	2.675	FL87	2150	1440
1	AS4509B		1 1/2	1.520	3.443	3.433	1.188	1.188	2.313	2.871	FL87	2300	1540
2	AS4509BD		1 1/2	1.520	3.3465	3.3460	1.188	1.188	2.313	2.871	FL85	2300	1540
2	AS4509BE		1 3/4	1.770	3.3465	3.3460	1.188	1.188	2.313	2.871	FL85	2300	1540
2	AS4510D		1 25/32	1.776	3.5433	3.5423	1.188	1.188	2.514	3.071	—	2480	1660

**SQUARE BORE**

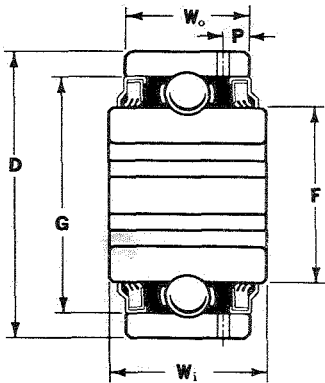
type	bearing number	shaft size		outside diameter D		ring widths		F	G	stamped flange number	radial capacity based on 3000 hrs. B-10 life		
		sealed	nominal	max.	max.	min.	inner W <sub>i</sub>				outer W <sub>o</sub>	@100 rpm	@500 rpm
1	AS4508H		7/8	.900	3.4385	3.4375	1.438	1.188	2.058	2.675	FL87	2150	1440
3	AS4508FF		7/8	.900	3.1496	3.1491	1.438	.7087	2.058	2.801	FL80	2150	1440
1	AS4508FC		7/8	.900	3.443	3.433	1.438	1.188	2.058	2.675	FL87	2150	1440
2	AS4508BE		1	1.025	3.1496	3.1491	1.438	1.188	2.058	2.675	FL80	2150	1440
3	AS4508BK		1	1.025	3.1496	3.1491	1.438	.7087	2.058	2.801	FL80	2150	1440
1	AS4508AC		1	1.025	3.443	3.433	1.438	1.188	2.058	2.675	FL87	2150	1440
2	AS4508EF		1 1/8	1.175	3.1496	3.1491	1.438	1.188	2.058	2.675	FL80	2150	1440
3	AS4508BJ		1 1/8	1.175	3.1496	3.1491	1.438	.7087	2.058	2.801	FL80	2150	1440
1	AS4508F		1 1/8	1.175	3.4385	3.4375	1.438	1.188	2.058	2.675	FL87	2150	1440
1	AS4508HC		1 1/8	1.138	3.443	3.433	1.438	1.188	2.058	2.675	FL87	2150	1440
1	AS4508BC		1 1/8	1.175	3.443	3.433	1.438	1.188	2.058	2.675	FL87	2150	1440
1	AS4509AC		1 1/4	1.275	3.443	3.433	1.438	1.188	2.313	2.871	FL87	2300	1540
2	AS4511BE		1 1/2	1.526	3.9370	3.9364	1.313	1.313	2.777	3.409	FL100	4260	2040
1	AS4511B		1 1/2	1.526	4.120	4.118	1.750	1.438	2.777	3.409	—	4260	2040
1	AS4511AC		1 1/2	1.526	4.130	4.120	1.750	1.438	2.777	3.409	—	4260	2040

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## HEAVY DUTY DISC HARROW BEARINGS — RELUBE TYPE

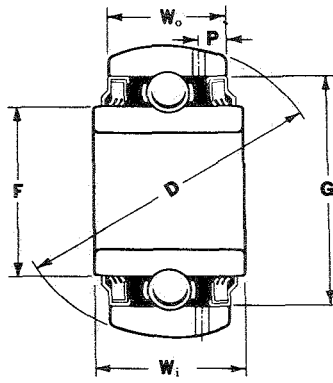
### TYPE 1

This bearing incorporates pressed-in Armor-Gard 3L Seals and a cylindrical O.D., with either round or square bore.



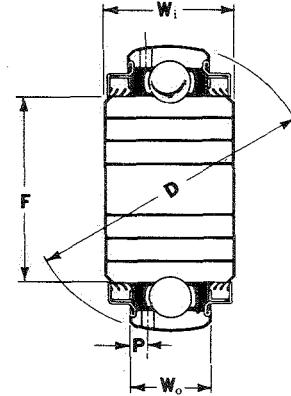
### TYPE 2

This bearing is the same as Type 1 except the O.D. is spherical.



### TYPE 3

This bearing incorporates crimped-in Armor-Gard 3L Seals and a spherical O.D., with either round or square bore.



RAS Series relube disc harrow bearings were designed for those unusually demanding applications where relubrication is desired or where lubricant purging may prove beneficial against corrosive contaminants. All incorporate NDH Armor-Gard 3L seals. Both cylindrical and spherical O.D. bearings are shown above.

#### ROUND BORE

type	bearing number	shaft size		outside diameter D		ring widths		F	G	P	radial capacity based on 3000 hrs. B-10 life		
		sealed	nominal	max.	max.	min.	Inner W <sub>i</sub>				outer W <sub>o</sub>	@100 rpm	@500 rpm
1	RAS4511C		2 <sup>3</sup> / <sub>16</sub>	2.1874	3.9370	3.9364	1.313	1.313	2.777	3.409	.360	4260	2040

#### SQUARE BORE

type	bearing number	shaft size		outside diameter D		ring widths		F	G	P	radial capacity based on 3000 hrs. B-10 life		
		sealed	nominal	max.	max.	min.	Inner W <sub>i</sub>				outer W <sub>o</sub>	@100 rpm	@500 rpm
3	RAS4508AE		1	1.025	3.1496	3.1491	1.438	.9449	2.058	2.801	.218	2150	1440
*	RAS4508BP		1 <sup>1</sup> / <sub>8</sub>	1.175	3 <sup>3</sup> / <sub>8</sub>	*	1.438	1.250	2.058	2.801	**	2150	1440
2	RAS4508EF		1 <sup>1</sup> / <sub>8</sub>	1.175	3.1496	3.1491	1.438	1.188	2.058	2.675	.359	2150	1440
3	RAS4508J		1 <sup>1</sup> / <sub>8</sub>	1.175	3.1496	3.1491	1.438	.8268	2.058	2.801	.178	2150	1440
1	RAS4510B		1 <sup>1</sup> / <sub>8</sub>	1.175	3.5433	3.5423	1.188	1.188	2.514	3.071	.305	2480	1660
2	RAS4510F		1 <sup>1</sup> / <sub>8</sub>	1.175	3.5433	3.5413	1.188	1.188	2.514	3.071	.305	2480	1660
2	RAS4509A		1 <sup>1</sup> / <sub>4</sub>	1.275	3.3465	3.3460	1.438	1.188	2.313	2.871	.344	2300	1540
1	RAS4511BD		1 <sup>1</sup> / <sub>2</sub>	1.526	3.9370	3.9364	1.313	1.313	2.777	3.409	.360	4260	2040
2	RAS4511BE		1 <sup>1</sup> / <sub>2</sub>	1.526	3.9370	3.9364	1.313	1.313	2.777	3.409	.360†	4260	2040
2	RAS4511BF		1 <sup>1</sup> / <sub>2</sub>	1.526	3.9370	3.9364	1.313	1.313	2.777	3.409	.360	4260	2040
‡	RAS4511AC		1 <sup>1</sup> / <sub>2</sub>	1.526	4.130	4.120	1.750	1.438	2.777	3.409	.446	4260	2040

\*Outer ring has integral trunnions.

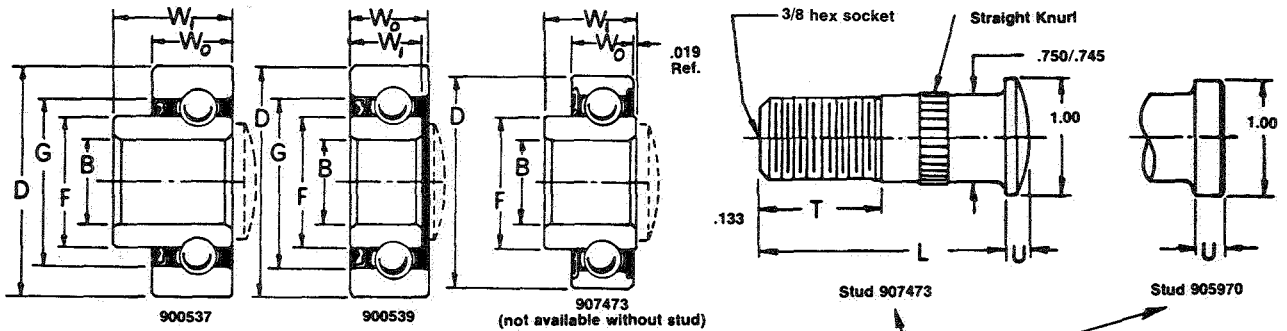
\*\*Lube fitting in trunnion.

†Relube groove

‡Type 1, page 17 except relubrication holes.

**BEARINGS EXTENSIVELY USED ON AGRICULTURAL EQUIPMENT-Cont'd**

**HAY RAKE TINE BAR BALL BEARINGS**  
Radial Load Capacity @ 500 RPM 3000 Hrs. B-10 - 760 lbs.



**BEARING DIMENSIONS (FOR CAPACITY, SEE BASIC 3204).**

Bearing	Bore B	O.D. D + .0000 - .0005	Width Wo + .000 - .005	Width Wi	Ring Corners To Clear Fillet		F ± .001	G Ref.
					Outer	Inner		
900537	.753 ± .005 - .003	2.0472	.700	1.053 ± .005	.040	.060	1.158	1.530
900539	.753 ± .003	2.0472	.700	.640 ± .000 - .005	.040	.060	1.158	1.530
907473	.753 ± .005 - .003	1.8504	.5512	.812 ± .005	.040	.040	1.158	-

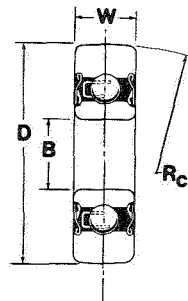
Stud	Length L ± .015	Thread Length T min.	Head Height U ± .010
905970	2.562	1.156	.250
† 907473	2.188	1.100	.188

† Has 3/8 internal hex socket.

SALEABLE TINE BAR ASSEMBLIES	→							
	900537	900539	905969	905970	907473	907659	908188	
	BEARING	900537	900539	900537	900537	907473	900539	900539
	STUD	-	-	907473	905970	907473	907473*	907473

\* Shipped unassembled

**BALL BEARING CAM FOLLOWERS**



**NOTES:**

- Standard specification is SY1Z.
- Seals are Armor-Gard T except CF2-108A which has special crimped notch riding seals.
- CF3-200D inner ring width .5906/.5856.
- CF3-200D crown radius tolerance ± .010
- Bore corner radii to clear .035R except CF3-200D to clear .025R.

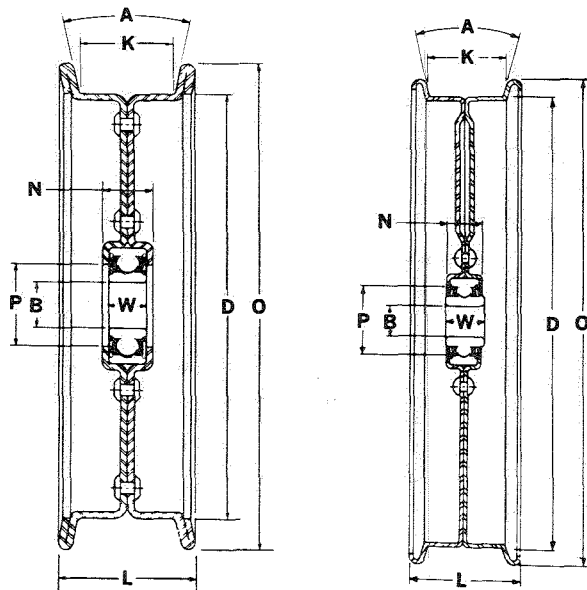
Bearing Number	Bore B	O.D. D	Width W ± .005	Crown Rc ± .005	Radial Cap. @ 500 RPM 3000 Hrs. B-10
CF2-108	.503 ± .003	1.500 ± .005	.433	3.000	350
CF2-108A	.503 ± .003	1.500 ± .005	.433	3.000	350
CF2-108B	.503 ± .001	1.500 ± .001	.433	3.000	350
CF3-200	.628 ± .003	2.000 ± .005	.505	4.000	550
CF3-200D	.6280 + .0000 - .0003	2.0000 + .0000 - .0005	.500	1.000	550

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## BEARINGS EXTENSIVELY USED ON AGRICULTURAL EQUIPMENT-Cont'd

### IDLER UNIT ASSEMBLIES

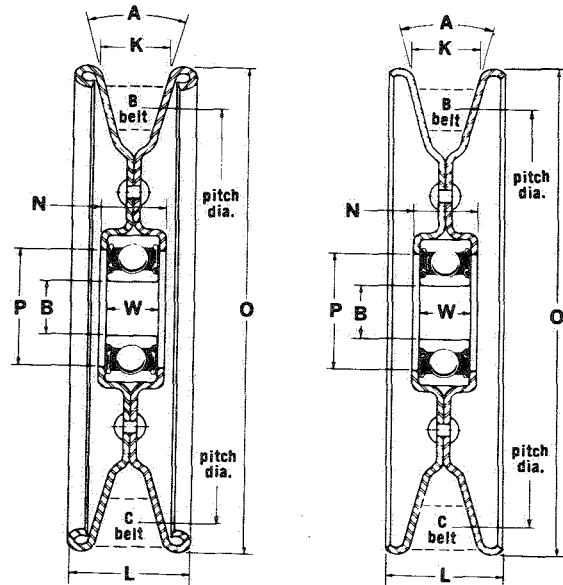
#### TYPE PF FLAT BELT PULLEYS



PF2 series

PF3 series

#### TYPE PV V-BELT PULLEYS



PV2 series

PV3 series

#### Type PF

AVAILABLE TYPES AND SIZES unit number	mounting bolt dia. B	effective o.d. D	sheave o.d. O	width N	sheave width L	belt pitch dia.		face width K	sheave bore P	inner ring width W	included angle A	radial load ratings @ 500 r.p.m. 3000 hrs. B10
						"B" section	"C" section					
PF2-212	1/2	2.75	3.25	.56	1.08	—	—	.700	1.00	.433	20°	350
PF2-212AB	1/2	2.75	3.25	.56	1.08	—	—	.700	1.00	.433	20°	350
*PF2-400	1/2	4.00	4.62	.57	1.50	—	—	1.062	1.00	.433	10°	350
*PF2-400AC	5/8	4.00	4.62	.57	1.50	—	—	1.062	1.00	.720	10°	350
PF2-400B	1/2	4.00	4.50	.57	1.38	—	—	1.062	1.00	.433	10°	350
*PF2-400C	1/2	4.00	4.62	.57	1.50	—	—	1.062	1.00	.720	10°	350
PF2-500	1/2	5.00	5.75	.57	1.56	—	—	1.062	1.00	.433	10°	350
PF3-508	3/8	5.50	6.00	.65	1.16	—	—	1.000	1.30	.720	10°	600
PF3-600	5/8	6.00	6.75	.62	1.64	—	—	1.062	1.14	.720	10°	600
PF3-600AF	1/2	6.00	6.75	.62	1.64	—	—	1.062	1.14	.720	10°	600
PF4-400B	1/2	4.02	4.55	.59	.98	—	—	.680	1.30	.650	49°	600
PF4-508	1/2	5.50	6.00	.65	1.19	—	—	1.000	1.30	.720	10°	600
PF4-700	1/2	7.00	7.50	.65	1.16	—	—	1.000	1.30	.720	10°	600

#### Type PV

*PV2-404	1/2	—	4.88	.57	1.17	4	4 3/4	.737	1.00	.433	32°	350
*PV2-404AC	5/8	—	4.88	.57	1.17	4	4 3/4	.737	1.00	.720	32°	350
†PV3-300	17mm	—	3.12	.69	.62	—	—	.380	1.37	.472	36°	600
‡PV3-303A	17mm	—	4.00	.65	.78	—	—	.500	1.30	.472	45°	600
PV3-315	17mm	—	4.04	.65	.58	—	—	.364	1.30	.472	36°	600
*PV3-612	1/2	—	7.31	.62	1.33	6	6 3/4	.872	1.14	.720	32°	600

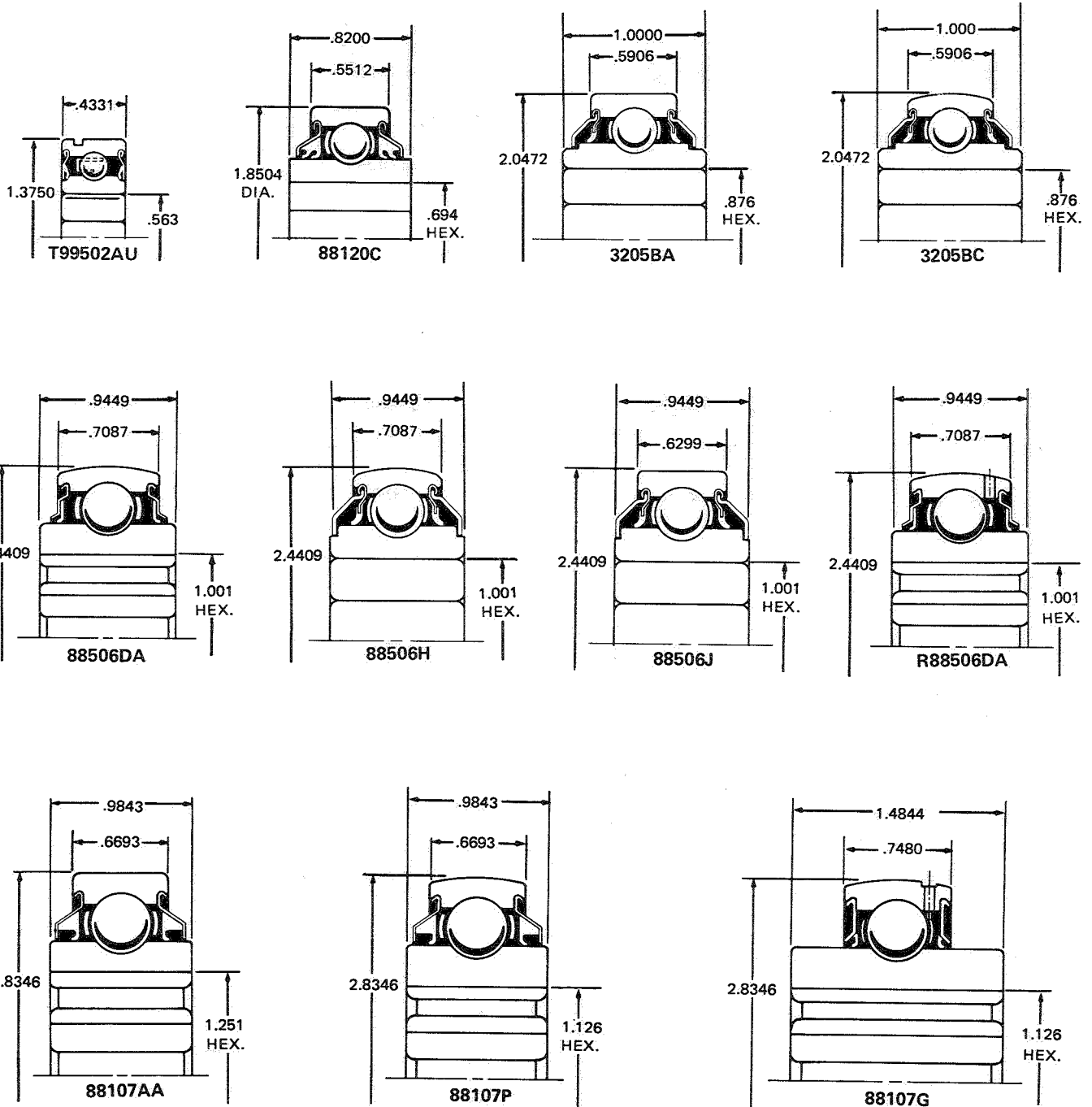
\*Rolled Edges

†Machined Pulley

‡Pulley for 3/16 Wire Rope

## Special Ball Bearings for Farm Implements

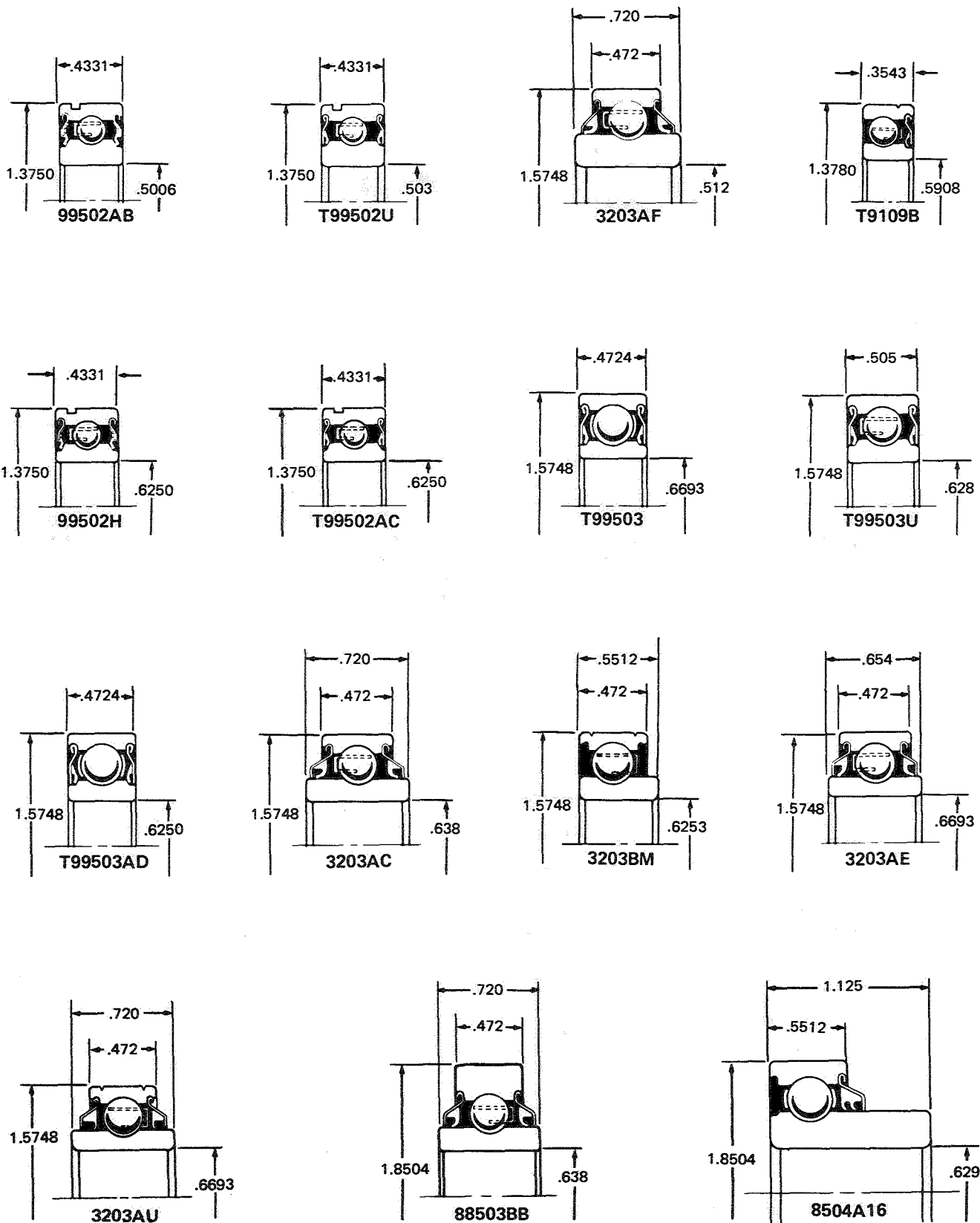
(Indicated hexagonal bore dimensions are across flats.)



These illustrations are to be used as a reference for boundary dimensions and general configuration only. Details of construction may be changed without notice.

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

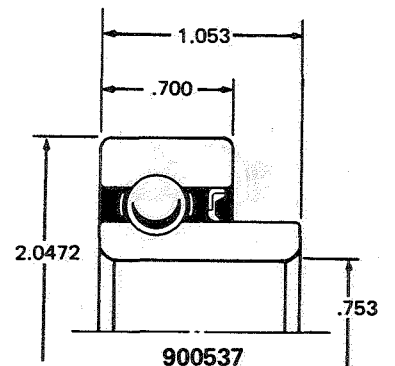
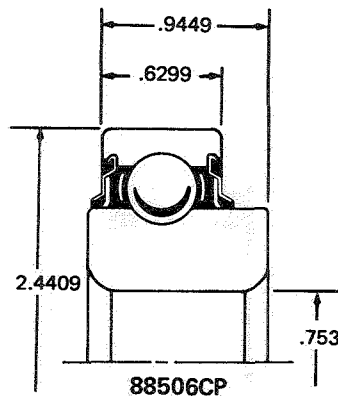
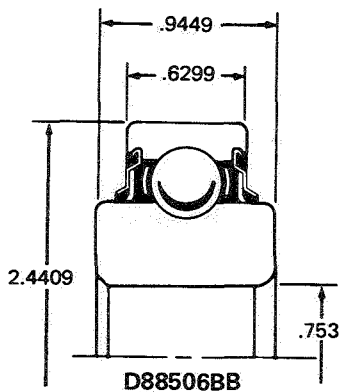
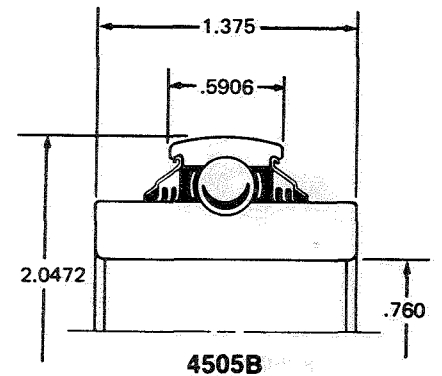
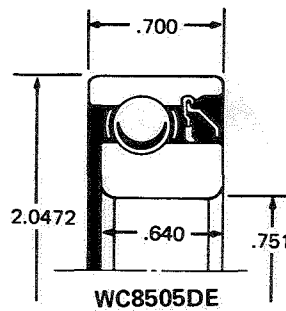
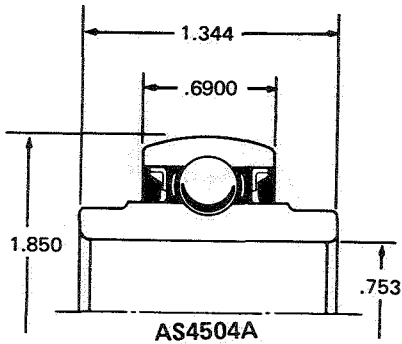
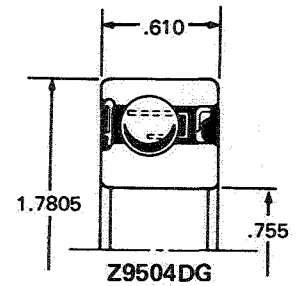
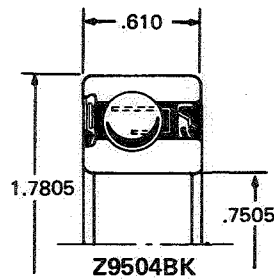
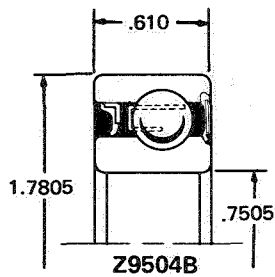
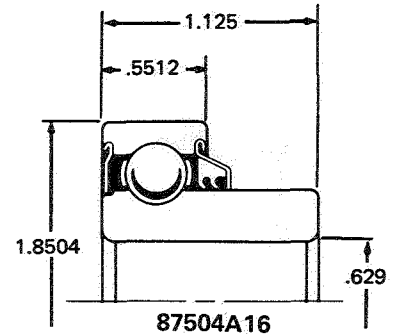
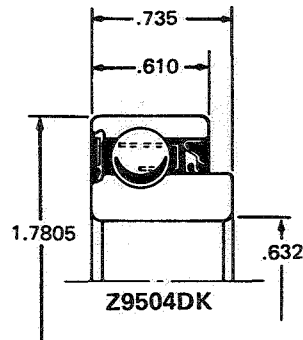
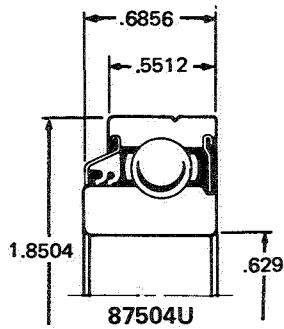
## SPECIAL BALL BEARINGS FOR FARM IMPLEMENTS



These illustrations are to be used as a reference for boundary dimensions and general configuration only. Details of construction may be changed without notice.



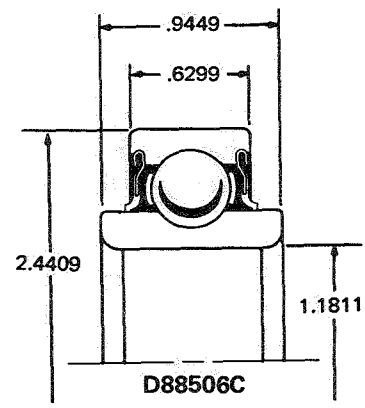
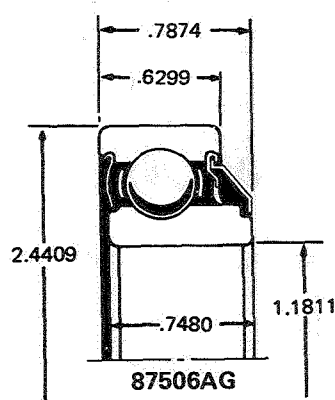
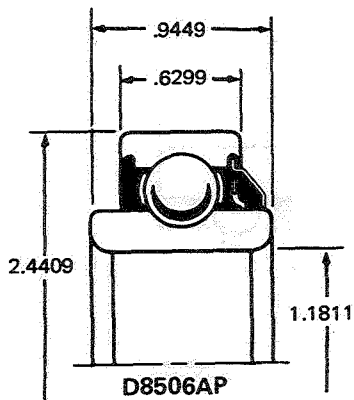
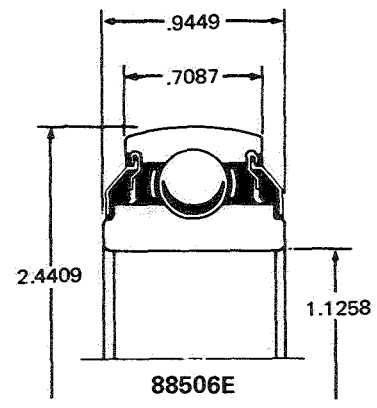
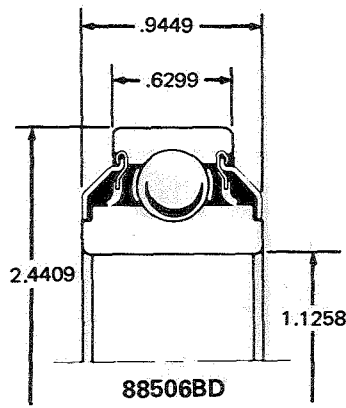
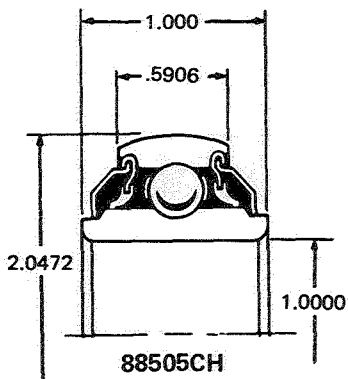
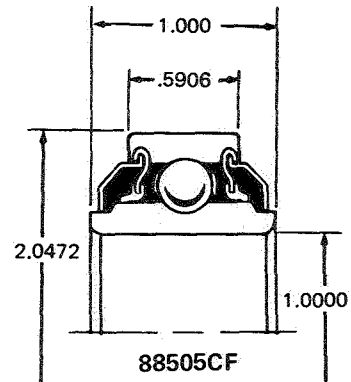
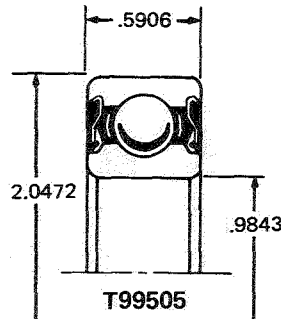
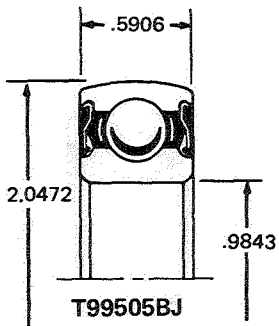
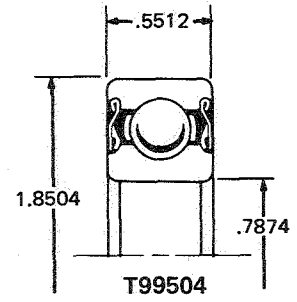
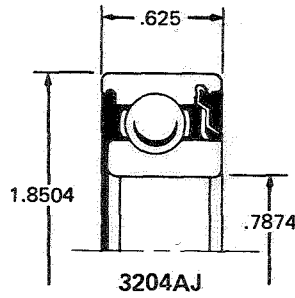
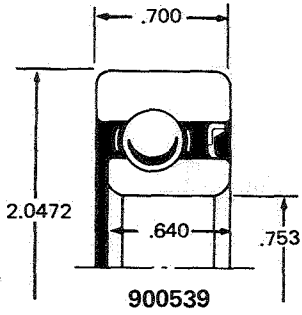
**SPECIAL BALL BEARINGS FOR FARM IMPLEMENTS**



These illustrations are to be used as a reference for boundary dimensions and general configuration only. Details of construction may be changed without notice.

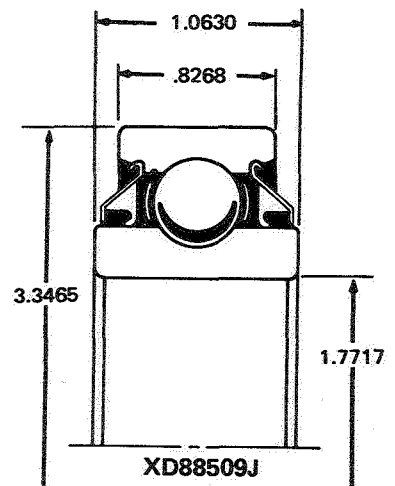
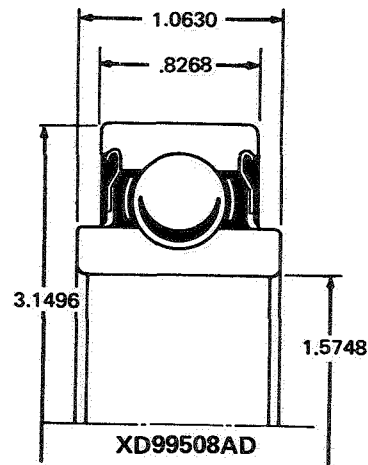
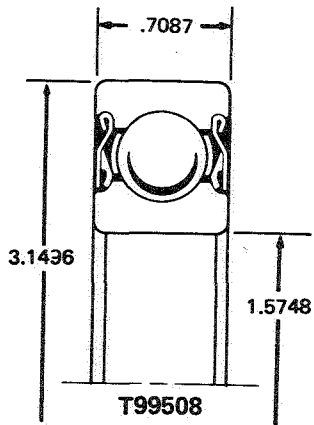
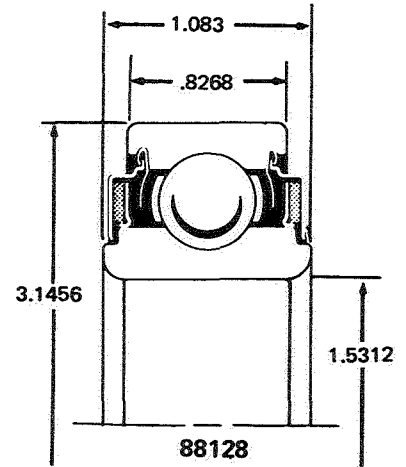
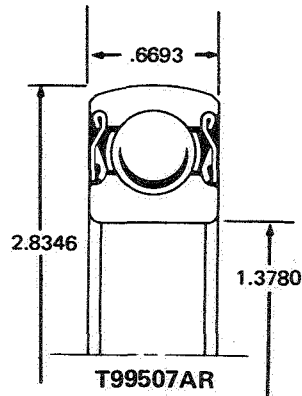
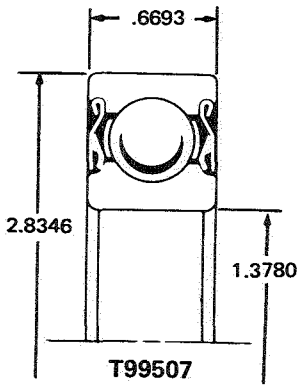
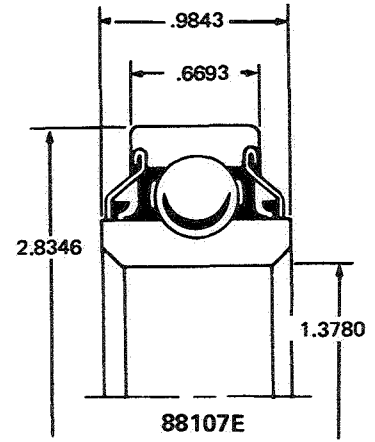
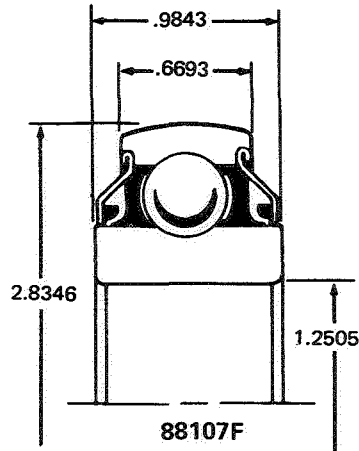
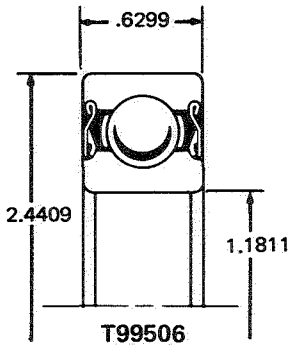
# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## SPECIAL BALL BEARINGS FOR FARM IMPLEMENTS



These illustrations are to be used as a reference for boundary dimensions and general configuration only. Details of construction may be changed without notice.

**SPECIAL BALL BEARINGS FOR FARM IMPLEMENTS**



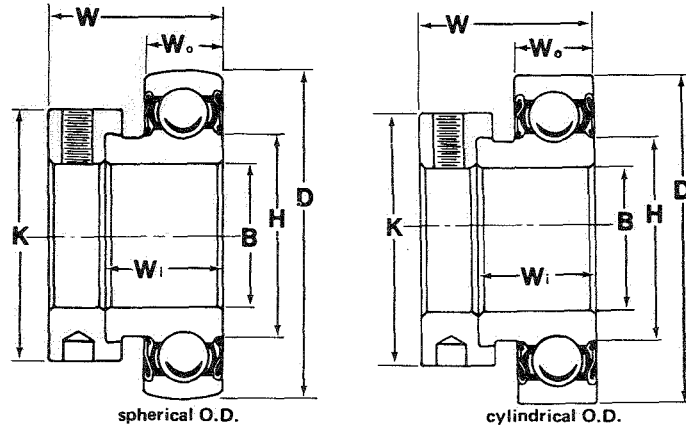
These illustrations are to be used as a reference for boundary dimensions and general configuration only. Details of construction may be changed without notice.

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### BEARINGS EXTENSIVELY USED ON AGRICULTURAL EQUIPMENT — Cont'd

#### ADAPTER BEARINGS

New Departure Hyatt adapter bearings make it possible to use a pre-lubricated efficiently sealed, precision ball bearing directly on commercial steel shafting without machining the bearing seat. They are designed for installations where loads and speeds are moderate and concentricity requirements are not too rigorous.



#### Type TA and 99A

spherical o.d. bearing no.	collar no.	shaft dia. B	spherical or cylindrical D		W	W <sub>o</sub>	W <sub>i</sub>	H	K	stamped flange no.	load rating @ 500 r.p.m. 3000 hrs. B10
			mm	in.							
TA008	E008	1/2	40	1.5748	1 1/8	.5118	.750	.858	1 3/16	FL40	570
TA009	E009	9/16	40	1.5748	1 1/8	.5118	.750	.858	1 3/16	FL40	570
TA010	E010	5/8	40	1.5748	1 1/8	.5118	.750	.858	1 3/16	FL40	570
TA011	E011	1 1/16	40	1.5748	1 1/8	.5118	.750	.858	1 3/16	FL40	570
TA012	E012	3/4	47	1.8504	1 7/32	.5906	.844	1.070	1 5/16	FL47	760
TA013	EO13	13/16	52	2.0472	1 7/32	.5906	.844	1.264	1 1/2	FL52	820
TA014	E014	7/8	52	2.0472	1 7/32	.5906	.844	1.264	1 1/2	FL52	820
TA015	E015	15/16	52	2.0472	1 7/32	.5906	.844	1.264	1 1/2	FL52	820
TA100	E100	1	52	2.0472	1 7/32	.5906	.844	1.264	1 1/2	FL52	820
TA101	E101	1 1/16	62	2.4409	1 13/32	.7087	.938	1.539	1 3/4	FL62	1220
TA102	E102	1 1/8	62	2.4409	1 13/32	.7087	.938	1.539	1 3/4	FL62	1220
TA103	E103	1 3/16	62	2.4409	1 13/32	.7087	.938	1.539	1 3/4	FL62	1220
TA104B	E104B	1 1/4	62	2.4409	1 13/32	.7087	.938	1.539	1 3/4	FL62	1220
TA104	E104	1 1/4	72	2.8346	1 17/32	.7480	1.000	1.730	2 3/16	FL72	1660
TA105	E105	1 5/16	72	2.8346	1 17/32	.7480	1.000	1.730	2 3/16	FL72	1660
TA106	E106	1 3/8	72	2.8346	1 17/32	.7480	1.000	1.730	2 3/16	FL72	1660
TA107	E107	1 7/16	72	2.8346	1 17/32	.7480	1.000	1.730	2 3/16	FL72	1660
TA108	E108	1 1/2	80	3.1496	1 23/32	.8661	1.188	1.940	2 3/8	FL80	1800
TA109	E109	1 9/16	80	3.1496	1 23/32	.8661	1.188	1.940	2 3/8	FL80	1800
99A110	E110	1 5/8	85	3.3465	1 23/32	.8661	1.188	2.188	2 1/2	FL85	2050
99A111	E111	1 11/16	85	3.3465	1 23/32	.8661	1.188	2.188	2 1/2	FL85	2050
99A112	E112	1 3/4	85	3.3465	1 23/32	.8661	1.188	2.188	2 1/2	FL85	2050
99A114	E114	1 7/8	90	3.5433	1 23/32	.8661	1.188	2.388	2 3/4	FL90	2200
99A115	E115	1 15/16	90	3.5433	1 23/32	.8661	1.188	2.388	2 3/4	FL90	2200
99A200	E200	2	100	3.9370	1 29/32	.9449	1.281	2.634	3	FL100	2700
99A202	E202	2 1/8	100	3.9370	1 29/32	.9449	1.281	2.634	3	FL100	2700
99A203	E203	2 3/16	100	3.9370	1 29/32	.9449	1.281	2.634	3	FL100	2700
99A204	E204	2 1/4	110	4.3307	1 15/16	.8661	1.312	2.856	3 5/16	—	3050
99A206	E206	2 3/8	110	4.3307	1 15/16	.8661	1.312	2.856	3 5/16	—	3050
99A207	E207	2 7/16	110	4.3307	1 15/16	.8661	1.312	2.856	3 5/16	—	3050

† The numbers shown are for specifying a bearing with a locking collar and spherical O.D. To specify a bearing with a cylindrical O.D., add the suffix "C" to the bearing number (consult New Departure-Hyatt Sales Representative for availability): To specify a bearing without a lock collar, add the prefix "LC" to the bearing number.

**Note:** Type TA and 99A with notch-riding Armor-Gard Seals and Type LA with Armor-Gard Land Riding Seals are ideal for withstanding the stalk winding, moisture and dirt usually encountered in farm implement applications. Type ZA with NDH Senti-Seals may be used for normal duty, non-agricultural equipment.

**BEARINGS EXTENSIVELY USED ON AGRICULTURAL EQUIPMENT — Cont'd**

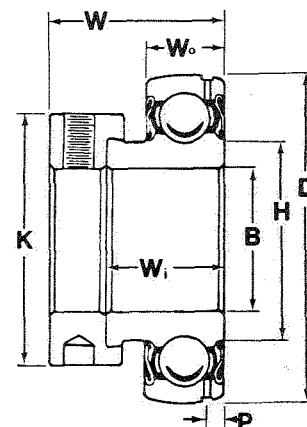
**ADAPTER BEARINGS — Cont'd**

**Relube Adapter Bearings**

RGWA and RGTA Series relube adapter bearings were designed for those unusually demanding applications where relubrication is desired or where lubricant purging may prove beneficial against corrosive contaminants.

Type RGWA (see illustration on page 28) features wide inner rings, eccentric locking collars, spherical O.D.'s, and New Departure Hyatt heavy duty land-riding Armor-Gard L Seals.

Type RGTA features spherical O.D.'s, eccentric locking collars; and NDH higher speed notch-riding Armor-Gard Seals (see illustration at right).



‡Cross section shows spherical O.D. which is standard. Also available with cylindrical O.D.

**Relube Type RGTA and RG99A**

spherical o.d. bearing no.	collar no.	shaft dia. B	spherical or cylindrical D		W	W <sub>0</sub>	W <sub>i</sub>	H	K	P	stamped flange numbers		load rating @ 500 r.p.m. 3000 hrs. B10
			mm	in.							fitting half	plain half	
RGTA008	E008	1/2	40	1.5748	1 1/8	.5118	.750	.858	1 3/16	.123			570
RGTA009	E009	9/16	40	1.5748	1 1/8	.5118	.750	.858	1 3/16	.123			570
RGTA010	E010	5/8	40	1.5748	1 1/8	.5118	.750	.858	1 3/16	.123			570
RGTA011	E011	1 1/16	40	1.5748	1 1/8	.5118	.750	.858	1 3/16	.123			570
RGTA012	E012	3/4	47	1.8504	1 7/32	.5906	.844	1.070	1 9/16	.132			760
RGTA013	E013	1 3/16	52	2.0472	1 7/32	.5906	.844	1.264	1 1/2	.132	RFL52C	RFL52D	820
RGTA014	E014	7/8	52	2.0472	1 7/32	.5906	.844	1.264	1 1/2	.132	RFL52C	RFL52D	820
RGTA015	E015	1 1/16	52	2.0472	1 7/32	.5906	.844	1.264	1 1/2	.132	RFL52C	RFL52D	820
RGTA100	E100	1	52	2.0472	1 7/32	.5906	.844	1.264	1 1/2	.132	RFL52C	RFL52D	820
RGTA101	E101	1 1/16	62	2.4409	1 13/32	.7087	.938	1.539	1 3/4	.156	RFL62C	RFL62D	1220
RGTA102	E102	1 1/8	62	2.4409	1 13/32	.7087	.938	1.539	1 3/4	.156	RFL62C	RFL62D	1220
RGTA103	E103	1 3/16	62	2.4409	1 13/32	.7087	.938	1.539	1 3/4	.156	RFL62C	RFL62D	1220
RGTA104B	E104B	1 1/4	62	2.4409	1 13/32	.7087	.938	1.539	1 3/4	.156	RFL62C	RFL62D	1220
RGTA104	E104	1 1/4	72	2.8346	1 17/32	.7480	1.000	1.730	2 3/16	.157	RFL72C	RFL72D	1660
RGTA105	E105	1 1/16	72	2.8346	1 17/32	.7480	1.000	1.730	2 3/16	.157	RFL72C	RFL72D	1660
RGTA106	E106	1 3/8	72	2.8346	1 17/32	.7480	1.000	1.730	2 3/16	.157	RFL72C	RFL72D	1660
RGTA107	E107	1 7/16	72	2.8346	1 17/32	.7480	1.000	1.730	2 3/16	.157	RFL72C	RFL72D	1660
RGTA108	E108	1 1/2	80	3.1496	1 23/32	.8661	1.188	1.940	2 3/8	.198	RFL80C	RFL80D	1800
RGTA109	E109	1 9/16	80	3.1496	1 23/32	.8661	1.188	1.940	2 3/8	.198	RFL80C	RFL80D	1800
RG99A110	E110	1 5/8	85	3.3465	1 23/32	.8661	1.188	2.188	2 1/2	.180			2050
RG99A111	E111	1 11/16	85	3.3465	1 23/32	.8661	1.188	2.188	2 1/2	.180			2050
RG99A112	E112	1 3/4	85	3.3465	1 23/32	.8661	1.188	2.188	2 1/2	.180			2050
RG99A114	E114	1 7/8	90	3.5433	1 23/32	.8661	1.188	2.388	2 3/4	.185	RFL90A	FL90A	2200
RG99A115	E115	1 15/16	90	3.5433	1 23/32	.8661	1.188	2.388	2 3/4	.185	RFL90A	FL90A	2200
RG99A200	E200	2	100	3.9370	1 29/32	.9449	1.281	2.634	3	.215			2700
RG99A202	E202	2 1/8	100	3.9370	1 29/32	.9449	1.281	2.634	3	.215			2700
RG99A203	E203	2 3/16	100	3.9370	1 29/32	.9449	1.281	2.634	3	.215			2700
RG99A204	E204	2 1/4	110	4.3307	1 19/16	.8661	1.312	2.856	3 5/16	.150			3050
RG99A206	E206	2 3/8	110	4.3307	1 15/16	.8661	1.312	2.856	3 5/16	.150			3050
RG99A207	E207	2 7/16	110	4.3307	1 19/16	.8661	1.312	2.856	3 5/16	.150			3050

‡ The numbers shown are for specifying a bearing with a locking collar and spherical O.D. To specify a bearing with a cylindrical O.D., add the suffix "C" to the bearing number (consult New Departure Hyatt Sales Representative for availability): To specify a bearing without a locking collar, add the prefix "LC" to the bearing number.

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### BEARINGS EXTENSIVELY USED ON AGRICULTURAL EQUIPMENT — Cont'd

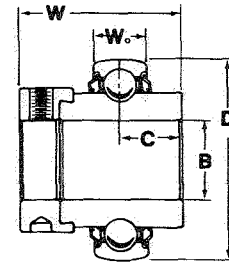
#### ADAPTER BEARINGS — Cont'd

**Type WA**

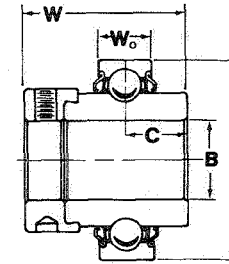
bearing no.	collar no.	shaft dia. B	spherical or cylindrical D		W	W <sub>0</sub>	W <sub>c</sub>	C	stamped flange no.	load rating @ 500 r.p.m. 3000 hrs. B10
			mm	in.						
*WA014	E014	7/8	52	2.0472	1 3/4	.5906		.688	FL52	820
WA014C	E014	7/8	52	2.0472	1 3/4	.5906		.688	FL52	820
*WA100	E100	1	52	2.0472	1 3/4	.5906		.688	FL52	820
WA100C	E100	1	52	2.0472	1 3/4	.5906		.688	FL52	820
*WA101	E101	1 1/16	62	2.4409	1 29/32	.7087		.719	FL62	1220
*WA102	E102	1 1/8	62	2.4409	1 29/32	.7087		.719	FL62	1220
*WA104B	E104B	1 1/4	62	2.4409	1 29/32	.7087		.719	FL62	1220
WE104BC	E104B	1 1/4	62	2.4409	1 29/32	.6299		.719	FL62	1220
WA104	E104	1 1/4	72	2.8346	2 1/64	.7480		.742	FL72	1660
WE104C	E104	1 1/4	72	2.8346	2 1/64	.6693		.742	FL72	1660
WA106	E106	1 3/8	72	2.8346	2 1/64	.7480		.742	FL72	1660
WA107	E107	1 7/16	72	2.8346	2 1/64	.7480		.742	FL72	1660
WE107C	E107	1 7/16	72	2.8346	2 1/64	.6693		.742	FL72	1660
WA108	E108	1 1/2	80	3.1496	2 7/32	.8661		.844	FL80	1800
*WA110	E110	1 5/8	85	3.3465	2 7/32	.8661		.844	FL85	2050
*WA112	E112	1 3/4	85	3.3465	2 7/32	.8661		.844	FL85	2050
WE112C	E112	1 3/4	85	3.3465	2 7/32	.7480		.844	FL85	2050

\*Triple lip seals available

‡The numbers shown are for specifying a bearing with a locking collar and spherical O.D. To specify a bearing with a cylindrical O.D., add the suffix "C" to the bearing number (consult New Departure Hyatt Representative for availability); To specify a bearing without a locking collar, add the prefix "LC" to the bearing number.

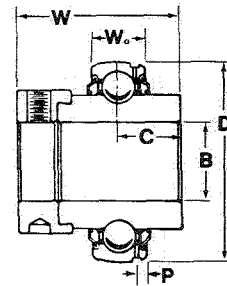


spherical O.D.



cylindrical O.D.

‡Cross section shows spherical O.D. which is standard. Also available with cylindrical O.D. — see note below.



**Relube Type RGWA**

spherical o.d. bearing no.	collar no.	shaft dia. B	spherical or cylindrical D		W	W <sub>0</sub>	C	P	stamped flange numbers	
			mm	in.					fitting half	plain half
RGWA100	E100	1	52	2.0472	1 3/4	.5906	.688	.132	RFL52C	RFL52D
RGWA102	E102	1 1/8	62	2.4409	1 29/32	.7087	.719	.156	RFL62C	RFL62D
RGWA104B	E104B	1 1/4	62	2.4409	1 29/32	.7087	.719	.156	RFL62C	RFL62D
RGWA104	E104	1 1/4	72	2.8346	2 1/64	.7480	.742	.157	RFL72C	RFL72D
RGWA106	E106	1 3/8	72	2.8346	2 1/64	.7480	.742	.157	RFL72C	RFL72D
RGWA107	E107	1 7/16	72	2.8346	2 1/64	.7480	.742	.157	RFL72C	RFL72D
**RWA108	E108	1 1/2	80	3.1496	2 7/32	.8268	.844	.178	RFL80C	RFL80D

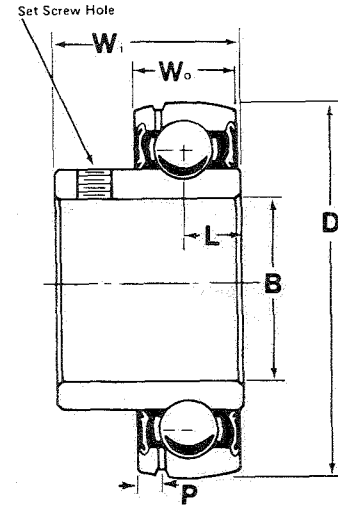
‡The numbers shown are for specifying a bearing with a locking collar and spherical O.D. To specify a bearing with a cylindrical O.D., add the suffix "C" to the bearing number (consult New Departure Hyatt Representative for availability); To specify a bearing without a locking collar, add the prefix "LC" to the bearing number.

\*\*Lubrication hole only (No groove)

**BEARINGS EXTENSIVELY USED ON AGRICULTURAL EQUIPMENT — Cont'd**

**ADAPTER BEARINGS — Cont'd**

While most adapter bearings are designed for rotation in one direction, the RGWAB-V series can be operated in either direction. The use of set screws provides economical mounting, and practical retainment on standard shafting for applications in which shafts rotate either clockwise or counter clockwise.



Set Screw Locking Type  
 RGWAB - V (shown)

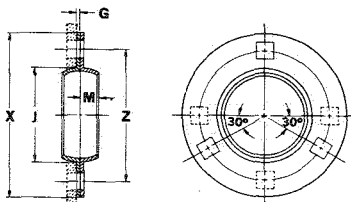
**Relube Type RGWAB**

spherical o.d. bearing no.	shaft dia. B	spherical or cylindrical D		W <sub>0</sub>	W <sub>1</sub>	L	P	set screw hole	load rating @ 500 r.p.m. 3000 hrs. B10
		mm	in.						
RGWAB008V	1/2	40	1.5748	.5118	.972	.328	.123	10-32	570
RGWAB009V	9/16	40	1.5748	.5118	.972	.328	.123	10-32	570
RGWAB010V	5/8	40	1.5748	.5118	.972	.328	.123	10-32	570
RGWAB011V	11/16	40	1.5748	.5118	.972	.328	.123	10-32	570
RGWAB012V	3/4	47	1.8504	.5906	1.070	.344	.132	1/4-28	760
RGWAB013V	13/16	52	2.0472	.5906	1.112	.351	.132	1/4-28	820
RGWAB014V	7/8	52	2.0472	.5906	1.112	.351	.132	1/4-28	820
RGWAB015V	15/16	52	2.0472	.5906	1.112	.351	.132	1/4-28	820
RGWAB100V	1	52	2.0472	.5906	1.112	.351	.132	1/4-28	820
RGWAB101V	1 1/16	62	2.4409	.7087	1.287	.381	.156	5/16-24	1220
RGWAB102V	1 1/8	62	2.4409	.7087	1.287	.381	.156	5/16-24	1220
RGWAB103V	1 3/16	62	2.4409	.7087	1.287	.381	.156	5/16-24	1220
RGWAB104BV	1 1/4	62	2.4409	.7087	1.287	.381	.156	1/4-28	1220
RGWAB104V	1 1/4	72	2.8346	.7480	1.457	.426	.157	5/16-24	1660
RGWAB105V	1 5/16	72	2.8346	.7480	1.457	.426	.157	5/16-24	1660
RGWAB106V	1 3/8	72	2.8346	.7480	1.457	.426	.157	5/16-24	1660
RGWAB107V	1 7/16	72	2.8346	.7480	1.457	.426	.157	5/16-24	1660
RGWAB108V	1 1/2	80	3.1496	.8661	1.551	.458	.198	5/16-24	1800
RGWAB109V	1 9/16	80	3.1496	.8661	1.551	.458	.198	5/16-24	1800
RGWAB110V	1 5/8	85	3.3465	.8661	1.586	.461	.180	5/16-24	2050
RGWAB111V	1 11/16	85	3.3465	.8661	1.586	.461	.180	5/16-24	2050
RGWAB112V	1 3/4	85	3.3465	.8661	1.586	.461	.180	5/16-24	2050
RGWAB114V	1 7/8	90	3.5433	.8661	1.626	.470	.185	5/16-24	2200
RGWAB115V	1 15/16	90	3.5433	.8661	1.626	.470	.185	5/16-24	2200
RGWAB200V	2	100	3.9370	.9449	1.743	.525	.215	5/16-24	2700
RGWAB202V	2 1/8	100	3.9370	.9449	1.743	.525	.215	5/16-24	2700
RGWAB203V	2 3/16	100	3.9370	.9449	1.743	.525	.215	5/16-24	2700
RGWAB204V	2 1/4	110	4.3307	.8661	1.898	.586	.150	5/16-24	3050
RGWAB206V	2 3/8	110	4.3307	.8661	1.898	.586	.150	5/16-24	3050
RGWAB207V	2 7/16	110	4.3307	.8661	1.898	.586	.150	5/16-24	3050

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### BEARINGS EXTENSIVELY USED ON AGRICULTURAL EQUIPMENT — Cont'd

#### STAMPED FLANGES



#### STANDARD NON-RELUBE TYPE

Stamped Flange No.	G	X	Z	Mounting Holes (square)		M	J	Stamped Flange Limiting Radial Load Rating (lbs.)
				No.	Size			
FL40	.075	3 <sup>3</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>2</sub>	3	9 <sup>3</sup> / <sub>32</sub>	9 <sup>3</sup> / <sub>32</sub>	1 <sup>7</sup> / <sub>8</sub>	600
FL47	.083	3 <sup>9</sup> / <sub>16</sub>	2 <sup>13</sup> / <sub>16</sub>	3	1 <sup>1</sup> / <sub>32</sub>	5 <sup>1</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>16</sub>	700
FL47B	.083	3 <sup>9</sup> / <sub>16</sub>	2 <sup>13</sup> / <sub>16</sub>	3	2 <sup>1</sup> / <sub>64</sub> *	5 <sup>1</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>16</sub>	700
FL52	.083	3 <sup>3</sup> / <sub>4</sub>	3	3	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	800
FL62	.104	4 <sup>7</sup> / <sub>16</sub>	3 <sup>9</sup> / <sub>16</sub>	3	1 <sup>3</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	2 <sup>13</sup> / <sub>16</sub>	1100
FL72	.104	4 <sup>13</sup> / <sub>16</sub>	3 <sup>15</sup> / <sub>16</sub>	3	1 <sup>3</sup> / <sub>32</sub>	3 <sup>3</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>16</sub>	1400
FL80	.134	5 <sup>13</sup> / <sub>16</sub>	4 <sup>11</sup> / <sub>16</sub>	4	1 <sup>7</sup> / <sub>32</sub>	1 <sup>3</sup> / <sub>32</sub>	3 <sup>9</sup> / <sub>16</sub>	1700
FL85	.134	5 <sup>7</sup> / <sub>8</sub>	4 <sup>3</sup> / <sub>4</sub>	4	1 <sup>7</sup> / <sub>32</sub>	7 <sup>1</sup> / <sub>16</sub>	3 <sup>13</sup> / <sub>16</sub>	1700
FL87**	.134	5 <sup>3</sup> / <sub>4</sub>	4 <sup>3</sup> / <sub>4</sub>	4	1 <sup>7</sup> / <sub>32</sub> X 3 <sup>7</sup> / <sub>64</sub>	2 <sup>1</sup> / <sub>32</sub>	3 <sup>7</sup> / <sub>8</sub>	1800
FL90	.149	6 <sup>1</sup> / <sub>8</sub>	5	4	1 <sup>7</sup> / <sub>32</sub>	7 <sup>1</sup> / <sub>16</sub>	4	1900
FL100	.149	6 <sup>9</sup> / <sub>16</sub>	5 <sup>7</sup> / <sub>16</sub>	4	1 <sup>7</sup> / <sub>32</sub>	1 <sup>5</sup> / <sub>32</sub>	4 <sup>7</sup> / <sub>16</sub>	2300

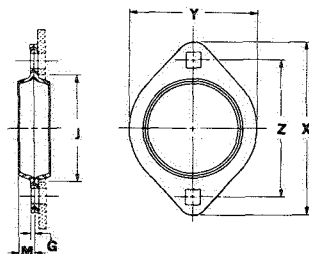
#### SPECIAL NON-RELUBE FLANGES

FL47A	.083	3 <sup>9</sup> / <sub>16</sub>	-	None	-	5 <sup>1</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>16</sub>	700
FL52A	.083	3 <sup>3</sup> / <sub>4</sub>	-	None	-	1 <sup>1</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	800
FL52E	.104	3 <sup>3</sup> / <sub>4</sub>	3	3	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	1100
FL62A	.104	4 <sup>7</sup> / <sub>16</sub>	-	None	-	1 <sup>1</sup> / <sub>32</sub>	2 <sup>13</sup> / <sub>16</sub>	1100
FL72B	.134	4 <sup>13</sup> / <sub>16</sub>	3 <sup>15</sup> / <sub>16</sub>	3	1 <sup>3</sup> / <sub>32</sub>	3 <sup>3</sup> / <sub>8</sub>	3 <sup>3</sup> / <sub>16</sub>	1700
FL80A	.134	5 <sup>13</sup> / <sub>16</sub>	-	None	-	1 <sup>3</sup> / <sub>32</sub>	3 <sup>9</sup> / <sub>16</sub>	1700
FL85A	.134	5 <sup>7</sup> / <sub>8</sub>	-	None	-	7 <sup>1</sup> / <sub>16</sub>	3 <sup>13</sup> / <sub>16</sub>	1700
FL87B**	.149	5 <sup>3</sup> / <sub>4</sub>	4 <sup>3</sup> / <sub>4</sub>	4	1 <sup>7</sup> / <sub>32</sub> X 3 <sup>7</sup> / <sub>64</sub>	2 <sup>1</sup> / <sub>32</sub>	3 <sup>7</sup> / <sub>8</sub>	1900
FL87F**	.134	5 <sup>3</sup> / <sub>4</sub>	4 <sup>3</sup> / <sub>4</sub>	4	1 <sup>7</sup> / <sub>32</sub> X 3 <sup>7</sup> / <sub>64</sub>	2 <sup>1</sup> / <sub>32</sub>	3 <sup>29</sup> / <sub>32</sub>	1800

\*Order two flanges per bearing.

\*\* Holes in FL87 and FL87B and FL87F are rectangular.

•Round hole.



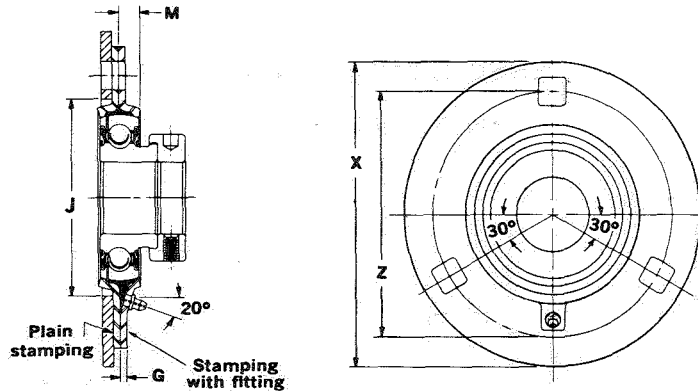
#### TWO-HOLE NON-RELUBE TYPE

stamped flange number	G	X	Z	mounting holes (square)		M	J	Y	stamped flange limiting radial load rating (lbs.)
				no.	size				
FL40-2	.075	3 <sup>3</sup> / <sub>16</sub>	2 <sup>1</sup> / <sub>2</sub>	2	9 <sup>3</sup> / <sub>32</sub>	9 <sup>3</sup> / <sub>32</sub>	1 <sup>7</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>16</sub>	600
FL47-2	.083	3 <sup>9</sup> / <sub>16</sub>	2 <sup>13</sup> / <sub>16</sub>	2	1 <sup>1</sup> / <sub>32</sub>	5 <sup>1</sup> / <sub>16</sub>	2 <sup>3</sup> / <sub>16</sub>	2 <sup>19</sup> / <sub>32</sub>	700
FL52-2	.083	3 <sup>3</sup> / <sub>4</sub>	3	2	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>64</sub>	800
FL52-2A	.134	3 <sup>3</sup> / <sub>4</sub>	3	2	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	2 <sup>5</sup> / <sub>64</sub>	1300



**BEARINGS EXTENSIVELY USED ON AGRICULTURAL EQUIPMENT — Cont'd**

**STAMPED FLANGES — Cont'd**



**STANDARD RELUBE TYPE**

Flange Numbers for Matching Pair		G	X	Z	Mounting Holes (square)		M	J	Stamped Flange Limiting Radial Load Rating (lbs.)	Type of Fitting (or equivalent)
Stamping with Fitting	Plain Stamping				No.	Size				
RFL52C	RFL52D	.083	3 <sup>3</sup> / <sub>4</sub>	3	3	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	800	straight (Alemite #3009)
RFL62C	RFL62D	.104	4 <sup>7</sup> / <sub>16</sub>	3 <sup>9</sup> / <sub>16</sub>	3	1 <sup>3</sup> / <sub>32</sub>	3 <sup>8</sup> / <sub>8</sub>	2 <sup>13</sup> / <sub>16</sub>	1100	straight (Alemite #3009)
RFL72C	RFL72D	.134	4 <sup>13</sup> / <sub>16</sub>	3 <sup>15</sup> / <sub>16</sub>	3	1 <sup>3</sup> / <sub>32</sub>	7 <sup>16</sup> / <sub>16</sub>	3 <sup>9</sup> / <sub>16</sub>	1400	straight (Alemite #3009)
RFL80C	RFL80D	.149	5 <sup>13</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>16</sub>	4	1 <sup>7</sup> / <sub>32</sub>	5 <sup>8</sup> / <sub>8</sub>	3 <sup>9</sup> / <sub>16</sub>	1700	straight (Alemite #3009)

**SPECIAL RELUBE FLANGES**

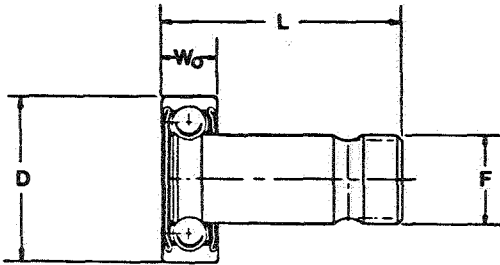
RFL52CA	RFL52D	.083	3 <sup>3</sup> / <sub>4</sub>	3	3	1 <sup>1</sup> / <sub>32</sub>	1 <sup>1</sup> / <sub>32</sub>	2 <sup>3</sup> / <sub>8</sub>	800	angular (Lincoln #700347)
RFL62CA	RFL62D	.104	4 <sup>7</sup> / <sub>16</sub>	3 <sup>9</sup> / <sub>16</sub>	3	1 <sup>3</sup> / <sub>32</sub>	3 <sup>8</sup> / <sub>8</sub>	2 <sup>13</sup> / <sub>16</sub>	1100	angular (Lincoln #700347)
RFL62E	RFL62F	.134	4 <sup>7</sup> / <sub>16</sub>	3 <sup>9</sup> / <sub>16</sub>	3	1 <sup>3</sup> / <sub>32</sub>	3 <sup>8</sup> / <sub>8</sub>	2 <sup>13</sup> / <sub>16</sub>	1400	straight (Alemite #3009)
RFL72CA	RFL72D	.134	4 <sup>13</sup> / <sub>16</sub>	3 <sup>15</sup> / <sub>16</sub>	3	1 <sup>3</sup> / <sub>32</sub>	7 <sup>16</sup> / <sub>16</sub>	3 <sup>9</sup> / <sub>16</sub>	1400	angular (Lincoln #700347)
RFL80CA	RFL80D	.149	5 <sup>13</sup> / <sub>16</sub>	4 <sup>1</sup> / <sub>16</sub>	4	1 <sup>7</sup> / <sub>32</sub>	5 <sup>8</sup> / <sub>8</sub>	3 <sup>9</sup> / <sub>16</sub>	1700	angular (Lincoln #700347)
RFL90A	FL90A	.164	6 <sup>1</sup> / <sub>8</sub>	5	4	1 <sup>7</sup> / <sub>32</sub>	1 <sup>2</sup> / <sub>2</sub>	4	2000	angular (Lincoln #700347)

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## BEARINGS EXTENSIVELY USED IN TEXTILE INDUSTRY (Many Have Other Applications)

### TENSION PULLEY BEARINGS

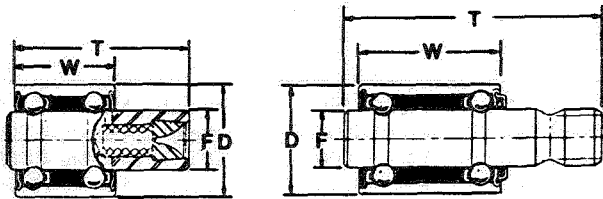
TYPES TP-15, TP-25 & TP-26



Bearing No.	F	D	W0	L
TP-15-500	.6267	1.1811	.551	2.172
TP-25	.5490	1.0236	.315	1.438
†TP-26	.5490	1.0236	.315	1.438

†Closed shield on flush side.

TYPES TP-20, TP-21, TP-31 & TP-824

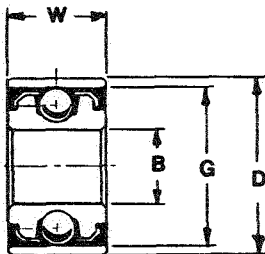


TP-20-500

TP-21-500  
TP-31  
TP-824

Bearing No.	Shaft Diam. F	Bearing O.D. D	Overall Length T	Outer Race Width W
TP-20-500	.6267	1.1811	1.922	1.062
TP-21-500	.6267	1.1811	2.812	1.532
TP-31	.6267	1.1811	3.250	1.532
TP-824	.7465	1.5000	3.890	2.125

### SPINDLE BEARING



TS-2

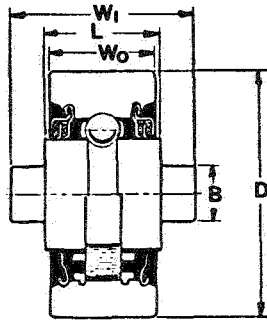
#### PRINCIPAL DIMENSIONS

Bearing No.	B	D	G	W
TS-2	.4724	1.1250	1.012	.625

**BEARINGS EXTENSIVELY USED IN TEXTILE INDUSTRY-Cont'd**

**TREADLE ROLL BEARINGS**

TM-15-505  
 thru  
 TM-22-505



RBTM-17  
 RBTM-17A

**PRINCIPAL DIMENSIONS**

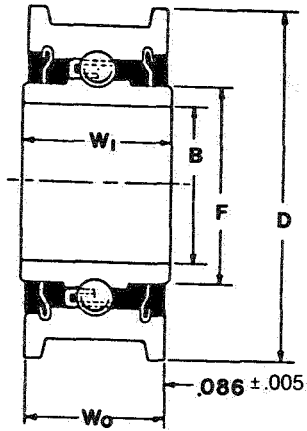
Bearing No.	B	D	Wi	L	Wo
TM-15-505	.500	2.313	2.125	1.594	1.502
*TM-17-505	.500	2.000	1.188	.781	.690
*TM-18-505	.500	2.062	1.375	.906	.813
*TM-19-505	.500	2.313	1.375	.906	.815
*TM-20-505	.520	2.313	2.000	1.094	1.002
*TM-22-505	.753	2.313	2.500	1.594	1.500

Bearing No.	B	D	Wi	L	Wo
‡RBTM-17	.500	2.000	1.188	.781	.689
‡RBTM-17A	.500	2.000	1.188	.781	.689

‡Roller bearings

\*Land riding seals with trash guards.

**SHEAVE BEARING**



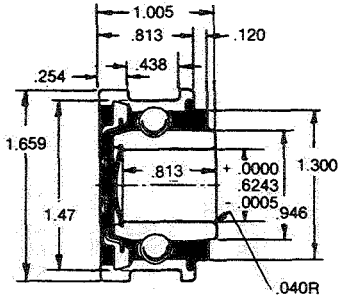
TP-30A

**PRINCIPAL DIMENSIONS**

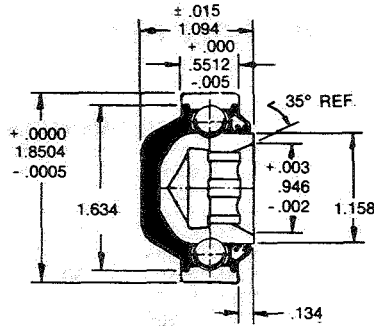
Bearing No.	B	D	Wo	Wi
TP-30A	1.015	2.208	.826	.875

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

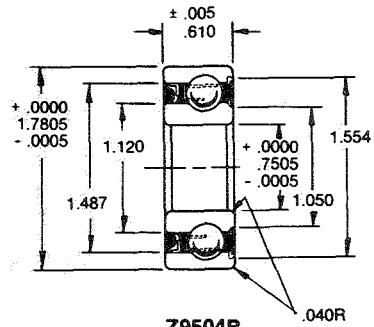
## CONVEYOR BALL BEARINGS



**CB3**



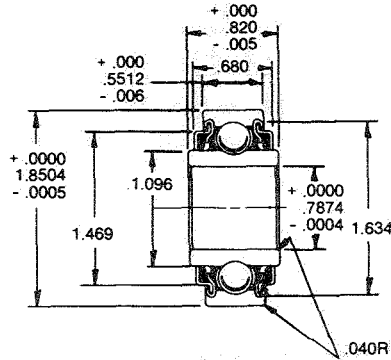
**CB504B CB504C**



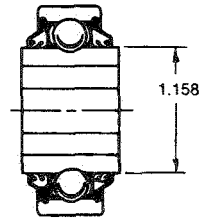
**Z9504B**

4CB504B = CB504B plus snap ring on seal side. CB504C has SS seal.

Conveyor R.L. Cap. @ 500 rpm 3000 hours B10	
CB3	470
CB504	570
Z9504B	760
88120B	760
88120C	760



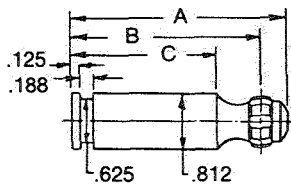
**88120B**



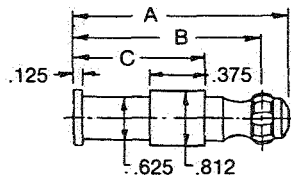
**88120C**

Same as 88120B except Hexagonal Bore .694" across flats, assembled with same seals as CB504C.

## CONVEYOR STUB SHAFTS

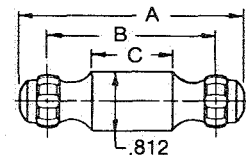


**TYPE No. 1**

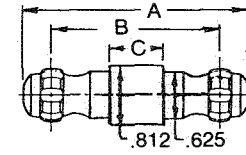


**TYPE No. 1A**

Shaft Number		A	B	C	Type No.
1CS	1 <sup>3</sup> / <sub>8</sub>	1.375	.984	.375	1*
1CS	1 <sup>15</sup> / <sub>16</sub>	1.938	1.547	.938	1
1CSA	1 <sup>15</sup> / <sub>16</sub>	1.938	1.547	.812	1A
1CS	2 <sup>1</sup> / <sub>4</sub>	2.250	1.859	1.250	1
1CS	2 <sup>1</sup> / <sub>2</sub>	2.500	2.109	1.500	1
1CSA	2 <sup>1</sup> / <sub>2</sub>	2.500	2.109	.906	1A
1CS	3	3.000	2.609	2.000	1
1CS	4 <sup>1</sup> / <sub>8</sub>	4.125	3.734	3.125	1
2CS	2 <sup>1</sup> / <sub>2</sub>	2.500	1.719	.500	2
2CS	2 <sup>9</sup> / <sub>16</sub>	2.562	1.781	.562	2
2CS	2 <sup>5</sup> / <sub>8</sub>	2.625	1.844	.625	2
2CSA	2 <sup>5</sup> / <sub>8</sub>	2.625	1.844	.375	2A
2CS	3	3.000	2.219	1.000	2
2CS	3 <sup>9</sup> / <sub>16</sub>	3.562	2.781	1.562	2
2CSA	3 <sup>9</sup> / <sub>16</sub>	3.562	2.781	.375	2A
2CS	4	4.000	3.219	2.000	2



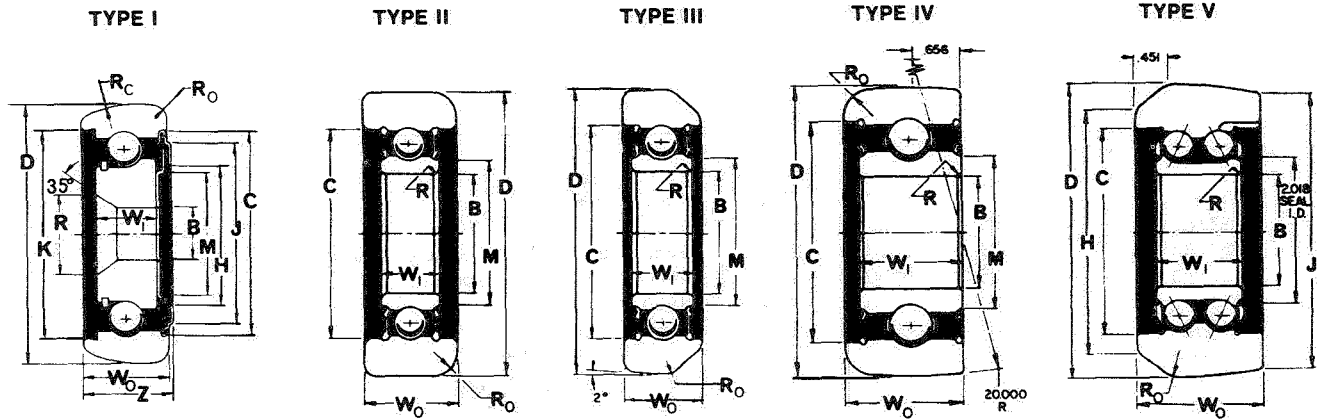
**TYPE No. 2**



**TYPE No. 2A**

\* without .624 diameter x .188 wide groove

**MAST GUIDE BALL BEARINGS**



Bearing Number	Type	Basic Brg.	Bore B + .0000 - .0005	O.D. D	Width Wi	Wo	M	C	Ro	R	Maximum Load
② MG101TY1Z8	III	spl.	1.5748	3.950	.7712	1.000	1.850	2.801	.188	.040	18400
② MG102SY1A	I	spl.	.593 ④	3.250	.625	.955	1.250	2.542	.125	.96	9400
③ MG103SY1A	I	spl.	.475 ④	2.300	.535	.750	1.106	1.810	.140	.74	8150
ZMG207ATY1Z8	II	spl.	1.3780	3.223	.6693	1.062	1.710	2.752	.125	.060	18200
ZMG506TY1Z8	III	3206	1.1811	3.200	.7712	1.000	1.551	2.145	.188	.040	7300
ZMG506ALY1Z8	II	3206	1.1811	2.990	.6299	1.000	1.551	2.141	.365	.040	7300
ZMG605TY1Z8	II	3305	.9843	2.970	.6693	1.000	1.414	2.086	.320	.040	7300
ZMG605ATY1Z8	II	3305	.9843	3.000	.6693	1.000	1.414	2.086	.320	.040	7300
ZMG607TY1Z8	II	3307	1.3780	4.000	.8268	1.125	1.842	2.728	.375	.060	12600
ZMG609XRY1Z8	II	3309	1.7717	5.000	.9843	1.250	2.329	3.515	.312	.060	20500
ZMG908LRY1ZF	IV	3308	1.5748	3.990	1.4375	1.625	2.080	3.068	.365	.060	15600
① TFMG5208LY1Z8	V	spl.	1.5748	4.077	1.1875	1.750	2.018	2.842	.500	.040	27000

① H = 3.375, J = 3.832

② Low carbon balls, unground pathways, H = 1.83, J = 2.29, K = 2.457, Rc = 1.62, Z = 1.10

③ Low carbon balls, unground pathways, H = 1.28, J = 1.62, K = 1.875, Rc = 1.15, Z = .78

④ Bore tolerance + .000/- .005

NOTE: TYPE 1 is Trolley Hanger Support Bearing.

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### STANDARD AND SPECIAL BALL BEARINGS

This list includes some of the NDH Standard and Special Bearings not otherwise tabulated. Some sizes listed may also be available with other standard prefix and/or suffix letters in the same bore size and series. For example: specialty letters "AA" suffixed to 77038 identify a stabilized double shielded bearing; but could also be used to identify stabilization for other bearings in the 38 family as 38AA, 7038AA, Z99038AA, etc. For availability of any NDH bearing, consult your supplier.

Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>R SERIES</b>					
R3AA	.1875	.5000	.1562	.1562	Stabilized
SS77R3AC	.1875	.5000	.1960	.1960	SS77R3 with Ribbon Separator and Low Shoulders
SS77R3AE	.1875	.5000	.2242	.2242	SS77R3 with Special Width
SS77R3BB	.1875	.5000	.1960	.1960	SS77R3 - Stabilized
R4J	.2500	.6250	.1960	.1960	Stabilized
SSR4D	.2500	.6250	.1960	.1960	SSR4 with Ribbon Separator and Low Shoulders
77R4BP	.2600	.6250	.1960	.1960	Special Bore
77R4CJ	.2500	.6250	.2260	.1960	Special I.R. Width
77R4F	.2500	.6250	.3440	.3440	Special Width
R77R4E	.2500	.6250	.1960	.1960	Relube Hole in One Shield
77R6AB	.3750	.7500	.2812	.2812	Small Ball Complement, Small Corners
77R6CE	.3937	.8750	.2812	.2812	Bore and .012 Bore Corners
SS77R6CF	.3750	.8750	.2812	.2812	Special Inspection and Marking
77R6BG	.3750	.8750	.2812	.2812	Black Oxide Finish on O.R. and Shields
SSZ99NR6	.3750	.8750	.2812	.2812	O.D. Flange .969 Dia. x .062
SSF8A	.5000	1.1250	.3125	.3125	Full Ball Complement - I.R. Snap
NR8E	.5000	1.1250	.3125	.3125	O.D. Flange 1.250 Dia. x .078
SSQR8K	.5000	1.1250	.3125	.3125	Special Ball Complement - O.R. Snap
SSQR8AF	.5000	1.1250	.2500	.2500	Special Ball Complement - O.R. Snap
77R10C	.7500	1.3750	.3438	.3438	Special Bore and Bore Corners
99R12E	.7500	1.6250	1.0625	.4724	Locking Collar on I.R.
R14B	.8750	1.8750	.3750	.3750	Premium Steel Specs.
SS77R14G	.8750	1.8750	.5000	.5000	Shield Marked 2-417
R18C	1.1250	2.1250	.375	.375	U Separator
7R22RU	1.3750	2.5000	.5625	.5625	Shield Marked Rotary Union 405U
<b>30 SERIES</b>					
RS7034D	.1575	.6299	.1969	.1969	Special Ball Complement
7035J	.1969	.7480	.2362	.4060	Wide O.R.
G36	.2362	.8750	.2362	.2362	Special O.D.
7036P	.2362	.7480	.2362	.2362	Wide Pathway Curvatures
77036R	.2362	.7480	.2362	.2362	Special .016 Corners
Z99036R	.2362	.7480	.2362	.2362	Special .016 Corners
77037AB	.2756	.8661	.2756	.2756	SS Shields
R88037R	.2756	.8661	.588	.406	Wide Rings
CWC87037-6	.2360	.8661	.3860	.4060	Special Bore
WD38DG	.3150	.8661	.2756	.2756	Special .016 Corners
Q7038AG	.3150	.8661	.3150	.3150	Special Width
77038AA	.3150	.8661	.2756	.2756	Stabilized
77038AF	.3150	.8661	.2756	.2756	Special .016 O.D. Corners
77038Q	.3127	.8661	.2756	.2756	Special Bore
Z99038CB	.3150	.8661	.2756	.2756	Special .016 O.D. Corners
Q39H	.3543	1.0236	.3150	.3150	15° Contact Angle - O.R. Snap
7039J	.3937	1.0236	.3150	.3150	Special Bore
<b>3L00 SERIES</b>					
WD3L00D	.3937	1.0236	.3150	.3150	Stabilized - O.R. Controlled Separator
WD3L00R	.3937	1.0236	.3150	.3150	Special Coated O.R. Controlled Separator
WD3L00AA	.3937	1.0236	.3150	.3150	Stabilized - Premium Steel
SS3L00AQ	.3937	1.0236	.3150	.3150	Stabilized
WD3L00CA	.3937	1.0236	.3150	.3150	Stabilized - I.R. Controlled Separator - .016 Corners
WC873L00A	.3937	1.0236	.4530	.4530	Width
WD3L01B	.4724	1.1024	.3150	.3150	Stabilized - I.R. Controlled Separator
SS3L01AC	.4724	1.1024	.3150	.3150	Slotted Faces
WD3L01E	.4724	1.1024	.3150	.3150	.016 Corners
Z998L01A	.4724	1.1024	.5900	.5900	Width and Stabilized
Z998L01R	.4724	1.1024	.5900	.5900	Width, Stabilized and Close Curvatures
WD3L02AD	.5906	1.2598	.3543	.3543	.016 Corners - I.R. Controlled Separator

**New Departure Hyatt**  
**BALL BEARING DIMENSIONAL DATA**

**STANDARD AND SPECIAL BALL BEARINGS**

This list includes some of the NDH Standard and Special Bearings not otherwise tabulated. Some sizes listed also available with standard prefix and suffix letters. For availability, please check with your supplier.

Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>3L00 SERIES - cont'd.</b>					
SS3L02AJ	.5906	1.2598	.3543	.3543	I.R. Face Slot
SS3L02BA	.5906	1.2598	.3543	.3543	Stabilized for 500°F.
WC873L02A	.5906	1.2598	.5000	.5000	Width
Z993L02AE	.5906	1.2598	.3543	.3543	.016 Corners, Special Marking
WD3L03R	.6693	1.3780	.3937	.3937	Stabilized - Premium Steel
WD3L03AD	.6693	1.3780	.3937	.3937	.016 Corners, Special Marking
Z993L03AA	.7250	1.3780	.3937	.3937	Bore and .008 Bore Corners
WD3L04G	.7874	1.6535	.4724	.4724	Stabilized - 4 Pc. I.R. Controlled Separator
3L04BC	.7874	1.6535	.4694	.4694	CEVM Material
3L05D	.9843	1.8504	.4724	.4724	Premium Steel
3L05AB	.9843	1.8504	.4724	.4724	Stabilized
WD3L05BA	.9843	1.8504	.4724	.4724	Face Flush Required - Special Marking
3L06D	1.1811	2.1654	.5118	.5118	Stabilized
WD3L06H	1.1811	2.1654	.6299	.5118	Puller Groove on I.R.
WD3L06AH	1.1811	2.1654	.5118	.5118	Stabilized - O.R. Controlled Separator
3L06BB	1.1811	2.1654	.5118	.5118	O.R. Face Slot
WD3L06BA	1.1811	2.1654	.5118	.5118	Special Stabilized
WD3L07C	1.3780	2.4409	.5512	.5512	Stabilized - I.R. Controlled Separator
3L07H	1.3780	2.4409	.5512	.5512	Special Small Bore Corner
3L07K	1.3780	2.4409	.5512	.5512	Stabilized
SS3L07AA	1.3780	2.4409	.5512	.5512	Stabilized for 600°F.
WD3L07AF	1.3780	2.4409	.5512	.5512	Stabilized - AMS Steel
WD3L07CA	1.3780	2.4409	.5512	.5512	Stabilized - O.R. has Corner Slot
3L08D	1.5748	2.6772	.5906	.5906	Stabilized
3L08P	1.5748	2.6772	.5906	.5906	Stabilized
WD3L08AA	1.5748	2.6772	.5906	.5906	Stabilized - CEVM - O.R. Controlled Coated Separator
WD3L08AB	1.5748	2.6772	.5906	.5906	Stabilized - O.R. Controlled Separator
3L10A	1.9685	3.1496	.8024	.6298	CEVM M50 - Puller Groove on I.R.
3L10B	1.9685	3.1496	.6298	.6298	CEVM M50 - Grooved Bore Corners
Z973L10C	2.0000	3.1496	.6299	.6299	Special Bore
773L13A	2.5591	3.9370	.7087	.7087	Width over Special Shield .8125
3L14D	2.8359	4.3307	.7874	.7874	Special Bore and .080 Bore Corners
773L14B	2.7559	4.3307	.7874	.7874	Width Over Special Shield .875
3L16D	3.2500	5.0000	.8661	.8661	Special Bore, O.D. and Ball Complement
3L20A	3.9370	5.9055	.9449	.7874	O.R. Width
3L24A	4.7244	7.0866	1.1024	.9055	O.R. Width
3L28A	5.5118	8.2677	1.2992	1.1024	O.R. Width
3L28AB	5.5118	8.2677	1.2992	1.2992	Stabilized
3L30A	5.9055	8.8583	1.3780	1.1811	O.R. Width
3L30C	5.9055	8.8583	1.3780	1.3780	Stabilized
<b>3LL00 SERIES</b>					
3LL03	.6693	1.1811	.2756	.2756	Standard Bearing
WD3LL03F	.6693	1.1811	.2756	.2756	CEVM Material
3LL03J	.6693	1.1811	.2756	.2756	CEVM M50 - Silver Plated Steel Separator
3LL03K	.6693	1.1811	.2756	.2756	Stabilized - AMS Steel
WD3LL03R	.6693	1.1811	.2756	.2756	Aircraft Inspection and Marking
3LL05	.9843	1.6535	.3543	.3543	Standard Bearing
3LL05H	.9843	1.6535	.3543	.3543	Aircraft Inspection and Marking
3LL05J	.9843	1.6535	.3543	.3543	Stabilized - Historical Records
SS3LL05K	.9843	1.6535	.3543	.3543	Stabilized for 450°F.
993LL05R	.9843	1.6535	.3543	.3543	Nylon Seals
SSWD3LL07	1.3780	2.1654	.3937	.3937	O.R. Controlled Separator
SS3LL07B	1.3780	2.1654	.3937	.3937	Stabilized for 550°F.
V3LL08	1.5748	2.4409	.4724	.4724	Standard Bearing with V Separator
V3LL08F	1.5748	2.4409	.4724	.4724	CEVM M50 - Special Ball Complement
V3LL08H	1.5748	2.4409	.4724	.4724	I.S.B. Separator - Aircraft Inspection
WD3LL08J	1.5748	2.4409	.4724	.4724	Stabilized - O.R. Controlled Separator
3LL08R	1.5748	2.4409	.4724	.4724	Special Inspection and Marking
WD3LL08U	1.5748	2.4409	.5876	.4694	Stabilized - Puller Groove on I.R.

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### STANDARD AND SPECIAL BALL BEARINGS

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Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>3LL00 SERIES - cont'd.</b>					
WD3LL08AC	1.5748	2.4409	.4724	.4724	Stabilized - O.R. Controlled Separator
Z993LL08B	1.5748	2.4409	.5906	.5906	Width - Open Pathway Curvatures
SSF773LL09B	1.7717	2.6772	.4724	.4724	Full Ball Complement - Loading Groove
V3LL11E	2.1654	3.1496	.5118	.5118	Aluminum-Bronze Separator
SS3LL13A	2.5591	3.5433	.5118	.5118	Full Type - Loading Groove - Stabilized for 550°F.
Q3LL22	4.3307	5.9055	.7874	.7874	Standard Bearing with Q Separator
<b>3LLL00 SERIES</b>					
V3LLL15A	3.0000	3.8750	.5000	.5000	O.R. Controlled I.S.B. Separator - Stabilized
<b>3100-7100-8100 SERIES</b>					
3107	.3126	.8661	.2756	.2756	38 with Special Bore
3111	.5000	1.250	.375	.365	O.D. has .250 Cross Radius
3112A	1.1811	1.8750	.2187	.2187	Hardened Separator on 3112H
3112H	1.1811	1.8750	.2187	.2187	U Separator - Close Pathway Curvature
7107B	.1971	.5779	.2362	.2362	Bore Corners Break .008 Max.
7108	.5118	1.2598	.3937	.3937	7501 with Special Bore
7109	.5906	1.3780	.3543	.3543	Width - U Separator
7109A16	.6255	1.3780	.3543	.3543	7109 with Special Bore
7109B	.5908	1.3780	.354	.354	7109 with Open Tolerance for Low Speeds
7109C	.5906	1.3780	.3543	.3543	Standard Ribbon Separator
7110	.5000	1.2598	.3937	.3937	7501 with Special Bore
7111	.2500	.7480	.2362	.2362	Bore .2501 to .2498
77115A	.5000	1.938	.500	.433	.219 R. Groove in O.D. - Cadmium Plated
7120	.6248	1.3780	.4331	.4331	Bore .6248 to .6244
<b>3200 SERIES</b>					
SP3200	.3942	1.1811	.3543	.3543	Special Bore - Open Pathway Curvatures
Q3200B	.3937	1.1811	.3543	.3543	Separable I.R. - Open Pathway Curvature
CE8500	.3937	1.1417	.480	.3543	Slinger Seal - O.A. Width .500
Q77500AG	.3937	1.1811	.5000	.5000	Special Width
88500K	.3937	1.1811	.6457	.3543	Key Tab on O.D.
3201A13	.5000	1.2598	.3937	.3937	Special Bore
WD3201E	.4724	1.2598	.3937	.3937	Open O.R. Pathway Curvature - 4 Pc. I.R. Controlled Sep.
WD3201AH	.4724	1.722	.3937	.453	26 Tooth Spur Gear on O.D.
3201BB	.4724	1.2598	.3937	.3937	Stabilized
WD3201BG	.4724	1.2598	.3937	.3937	Stabilized - Open O.R. Curvature
3201BJ	.5000	1.2598	.3937	.3937	Special Bore in 43201LR1241
77501AD	.4724	1.2598	.3937	.3937	Beryllium Copper Rings and Balls
88501A11	.4379	1.2598	.6063	.3937	Special Bore
Z99501AU	.5118	1.2598	.3937	.3937	Special Bore
3202C16	.6253	1.3748	.4331	.4331	Special Bore and O.D.
WD3202P	.5906	1.3780	.4331	.4331	Stabilized - 4 Pc. I.R. Controlled Separator
3202BB	.6253	1.3780	.4331	.4331	Special Bore
7502-16	.6299	1.3780	.4331	.4331	Special Bore
7502B16	.6299	1.4961	.4331	.4331	Special Bore and O.D.
7502H	.6250	1.3750	.4331	.4331	Dim. and Tol. Special - O.D. Snap Ring Groove - "U" Sep.
9502AB	.5006	1.3750	.4331	.4331	7502H except Bore and Crimped Molded Rubber Seal
Z99502F16	.6250	1.3780	.4331	.4331	Special Bore
T99502R	.5906	1.3780	.5669	.4331	Special I.R. Width
T99502U	.503	1.3750	.4331	.4331	7502H Except Bore and Seals
Z99502AC	.6250	1.3750	.4331	.4331	7502H Except Senti-Seals
Z99502AM	.628	1.3750	.720	.4331	7502H Except Seals and Special I.R.
T99502AU	SPL.	1.3750	.4331	.4331	7502H Except Seals and 9/16" Hex Bore
Z99502BG	.5906	1.3780	.5669	.4331	88502 with Senti-Seals
Z99502CG	.6248	1.3780	.4331	.4331	Special Bore
WD3203E	.6693	1.5748	.4724	.4724	Stabilized
3203AC	.638	1.5748	.720	.472	Two Armor-Gard L.R. Seals - Open Tolerance
3203AE	.6693	1.5748	.654	.472	3203AC Except I.R. Width
3203AF	.512	1.5748	.720	.472	3203AC Except Bore



# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## STANDARD AND SPECIAL BALL BEARINGS

This list includes some of the NDH Standard and Special Bearings not otherwise tabulated. Some sizes listed also available with standard prefix and suffix letters. For availability, please check with your supplier.

Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>3200 SERIES - cont'd.</b>					
3203AK	.6693	1.5748	.350	.350	Special Width and Snap Ring Groove
3203AU	.6693	1.5748	.720	.472	3203AC Except Bore
3203BM	.6253	1.5748	.5512	.472	Flush One Side - U Type Separator - Special Bore
3203DG	.6693	1.5748	.4724	.4724	Deep Groove Pathways - Rivet Separator
77503AD	.6250	1.5748	.4724	.4724	Special Bore
88503AG	.628	1.5748	.720	.472	3203AC Except Bore
88503BB	.638	1.8504	.720	.472	3203AC Except O.D.
T99503U	.628	1.5748	.505	.505	Special Width - U Type Separator
T99503AR	.5006	1.5748	.4724	.4724	Special Bore
Z99503BF	.5000	1.5748	.4724	.4724	Special Bore
Z99503BP	.6693	1.5748	.4724	.4724	Special Grooved and Knurled O.D.
Z99803	.6693	1.5748	.6875	.6875	Special Width
WD3204P	.7874	1.8504	.5512	.5512	Stabilized - I.R. Controlled Separator
V3204Q	.7874	1.8504	.5512	.5512	I.S.B. O.R. Controlled Separator
3204AJ	.7874	1.8504	.600	.625	One L.R. Seal, on Flush Side
WD3204AP	.7874	1.8504	.5512	.5512	Stabilized - O.R. Controlled Separator
3204BB	.7874	1.8504	.5512	.5512	Stabilized - Special O.R. Pathway Curvature
WD3204CC	.6693	1.8504	.5512	.5512	WD3204AP with Special Bore
3204DA	.7874	1.8504	.5512	.5512	Split I.R. - 1 Pc. Separator - Face Slot in O.R.
WD3204DD	.7874	1.8504	.5512	.5512	CEVM M50 - O.R. Controlled Separator - Corner Slot in O.R.
8504A16	.629	1.8504	1.125	.5512	Special Bore - 2 Lip Armor-Gard Seal on Extended Side
WC8504B	.7874	2.0472	.600	.610	Special O.D. - Width O.A. .625
Z9504B	.7505	1.7805	.610	.610	See Page 23
Z9504BK	.7505	1.7805	.610	.610	Z9504B with 2 Lip L.R. Seal
Z9504DG	.755	1.7805	.610	.610	Z9504B Except Bore
Z9504EC	.755	1.7805	.610	.610	Z9504DG with 2 Lip L.R. Seal
77504CF	.7500	1.8504	.5512	.5512	Special Bore
77504CJ	.8125	1.8504	.5512	.5512	Special Bore
77504EB	.8750	1.8504	.5512	.5512	Special Bore
87504U	.629	1.8504	.6856	.5512	Special Bore - 2 Lip Armor-Gard Seal
ZWC97504AJ	.7874	1.8504	.6000	.6250	WC8504 with Senti-Seal
Z98504A16	.629	1.8504	1.125	.5512	8504A16 plus Senti-Seal
Z99504C22	.8553	1.8504	.5512	.5512	Special Bore
T99504R	.7874	1.8504	.6988	.5512	Special I.R. Width and Marking
Z99504AB	.7874	1.8504	.5512	.5512	Stabilized
Z99504CH	.7491	1.8504	.5512	.5512	Special Bore
99804DE	.7874	1.8504	.8125	.8125	Special Width - Stabilized - Fluorocarbon Seals
WD3205K	.9843	2.0472	.5906	.5906	Stabilized - I.R. Controlled Separator
3205AE	1.0236	2.0455	.5906	.5906	Special Bore and O.D.
WD3205AP	.9843	2.0472	.5816	.5906	Stabilized - Flush One Side - I.R. Controlled Separator
3205BA	SPL.	2.0472	1.000	.5906	7/8" Hex Bore - Trash Guard L.R. Seals
3205BC	SPL.	2.0472	1.000	.5906	3205 BA with Spherical O.D.
V3205BG	.9843	2.0472	.5906	.5906	Split I.R. - Stabilized - I.S.B. 1 Pc. Separator
WD3205BK	.9843	2.0472	.5906	.5906	WD3205K plus O.R. Corner Slot
3205CK	.9843	2.0000	.5906	.5906	Special O.D.
WC8505DE	.751	2.0472	.640	.700	Special Bore and Widths - Trash Guard L.R. Seal
Z9505CJ	.9843	2.0472	.5906	.5906	Modified for No Seal Drag
77505DC	.501	2.0472	.7500	.5906	Special Bore and Width I.R.
87505B25	.9964	2.0150	.6000	.5906	87505 with Special Bore and O.D.
87505CB	.9843	2.0472	.6000	.5906	87505 with Armor-Gard T Seal
C88505R	.9843	2.0472	.6594	.5906	Stabilized
C88505CA	.9843	2.0472	.6594	.5906	Riveted Separator
88505CF	1.0000	2.0472	1.000	.5906	Trash Guard L.R. Seals
97805BH	.9843	2.0472	.8125	.8125	Stabilized - Special Width - Silver Plated Separator
Z99505R	.9843	2.0472	.5906	.5906	Stabilized
T99505BJ	.9843	2.0472	.5906	.5906	Spherical O.D.
T499505DA	1.0000	2.0000	.7100	.5906	Special Bore, O.D. and I.R. Width
3206AQ	1.2509	2.4409	.9449	.6299	Special Bore and Width of I.R.
3206CK	1.1811	2.4409	.6299	.6299	Gothic Arch Pathways
V3206DU	1.1811	2.4409	.6299	.6299	CEVM H.C.C. Material - O.R. Controlled Separator
3206EJ	1.1811	2.4409	.6299	.6299	Slot Across O.D.

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### STANDARD AND SPECIAL BALL BEARINGS

This list includes some of the NDH Standard and Special Bearings not otherwise tabulated. Some sizes listed also available with standard prefix and suffix letters. For availability, please check with your supplier.

Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>3200 SERIES - cont'd.</b>					
D8506AP	1.1811	2.4409	.9449	.6299	88506 with One Seal (Trash Guard L.R. Type)
87506AG	1.1811	2.4409	.7480	.6299	87506 with Trash Guard L.R. Seal
D88506C	1.1811	2.4409	.9449	.6299	.090 Bore Corners - L.R. Seals
D88506C29	1.1250	2.4409	.9449	.6299	Special Bore
89506E	1.1258	2.4409	.9449	.7087	88506 with Sph. O.D. - Special Bore - Trash Guard L.R. Seals
D88506F	1.1811	2.4409	.7874	.7874	Special Width - L.R. Seals
88506H	SPL.	2.4409	.9449	.7087	1" Hex Bore - Sph. O.D. - Trash Guard L.R. Seals
88506J	SPL.	2.4409	.9449	.6299	1" Hex Bore - Trash Guard L.R. Seals
D88506BB	.753	2.4409	.9449	.6299	Special Bore - L.R. Seals
88506BD	1.1258	2.4409	.9449	.6299	Special Bore - Trash Guard L.R. Seals
XD88506CA	1.1811	2.4409	.9449	.6299	L.R. Seals
D88506CE	SPL.	2.4409	.9449	.6299	3/4" Square Bore - L.R. Seals
88506CF	SPL.	2.4409	.9449	.7087	88506H plus Relube Hole thru O.R.
88506CP	.753	2.4409	.9449	.6299	Special I.R. and L.R. Seals - Offset O.R.
88506DA	SPL.	2.4409	.9449	.7087	1" Hex. Bore - Sph. O.D. - L.R. Seals
Z99506A	1.1811	2.4409	.6299	.6299	Stabilized Rings - Riveted Separator
Z99506J	1.1811	2.4409	.6299	.6299	Stabilized
Z99506P	1.1811	2.4409	.6299	.6299	Special Sentri-Seal
3207E	1.3726	2.8346	.6693	.6693	Special Bore
SS3207AJ	1.3780	2.8346	.6693	.6693	Face Slots Both Rings
3207BB	1.3780	2.8346	.6693	.6693	CEVM H.C.C. Material
3207BR	1.3780	2.8346	.8493	.6693	CEVM M50 Material - Puller Groove on I.R.
47507CH	1.1811	2.8346	.6693	.6693	Special Bore
47507CU	1.3780	2.8346	.6693	.6693	Shield Fixed to I.R.
Z99507H	1.3780	3.1720	.6693	.6693	O.D. Rib .454 Wide for Chain Guide
T99507AR	1.3780	2.8346	.6693	.6693	Spherical O.D.
Z99507BP	1.3780	3.241	.9843	.9843	Special - Spherical O.D. and Widths
XD88508AD	1.5748	3.1496	1.0630	.8268	L.R. Seals
Q3209F	1.7717	3.3465	.7480	.7480	O.R. Corner Slot
47509A45	1.7717	3.3465	.6780	.7480	Narrow I.R. - Snap Ring O.D. 3/16
XD88509J	1.7717	3.3465	1.0630	.8268	Armor-Gard L Seals
3210B	1.9380	3.5433	1.9375	.7874	Special Bore and Width of I.R.
3211D	2.1654	3.9370	.8268	.8268	Special .025 O.D. Corners
SSQ3211E	2.1654	3.9370	.8268	.8268	Special Non-metallic Separator with 8 Balls
SSQ3211F	2.1654	3.9370	.8268	.8268	Special Nylon Separator with 8 Balls
3212R	2.2500	4.3307	.8661	.8661	Special Bore
3212BC	2.3622	4.3307	1.024	.8661	Extended I.R.
WC8512AB	2.3622	4.3307	1.1417	1.1417	Special Width for Special L.R. Press Fit Seal
77512AP	2.3622	4.3307	.8661	.8661	Stabilized
88512-55	2.1654	4.3307	1.2992	.9843	Special Bore
Q3222D	4.3307	7.8740	1.1496	1.1496	Stabilized Rings
<b>3300 SERIES</b>					
V3303B	.6693	1.8504	.5512	.5512	Stabilized - Bronze Separator - Aircraft Inspection
3303F	.4724	1.8504	.5512	.5512	Special Bore
88603D	.6693	1.8512	.7087	.5512	Cadmium Plated Except Bore
3304J	.7874	2.0472	.5906	.5906	Split I.R. - CEVM M50 Material - O.R. has Face Slot
3304P	.7874	2.0472	.5906	.5906	Bore Corner One Side .005 R. Max.
3305H	.9843	2.4409	.6693	.6693	Stabilized
V3305P	.9843	2.4409	.6693	.6693	Stabilized - I.S.B. O.R. Controlled Separator
3305AG	.9843	2.4409	.6663	.6663	M50 Material - Silver Plated Separator - Special Width
99605F	.9843	2.4409	.6693	.6693	Low Temperature Stabilized - SS Rivets
43306U	1.1811	2.8346	.7480	.7480	.020 R. Bore Corners
47606RV	1.1811	2.8346	.7480	.7480	Shield Fixed to I.R.
43307P	1.3780	3.1496	.8268	.8268	.030 R. Bore Corners
43307AD	1.3780	3.1496	.7087	.7087	Width and .008 R. Bore Corners
3308AD	1.5748	3.5433	.9055	.9055	CEVM M50 Material - Silver Plated Steel Separator
43308C	1.5748	3.5433	.7874	.7874	Special Width - .025 R. Bore Corners
43308G	1.3780	3.5433	.7874	.7874	Special Width and Bore
43308H	1.5748	3.5433	.9055	.9055	.016 R. Bore Corners

# New Departure Hyatt BALL BEARING DIMENSIONAL DATA

## STANDARD AND SPECIAL BALL BEARINGS

This list includes some of the NDH Standard and Special Bearings not otherwise tabulated. Some sizes listed also available with standard prefix and suffix letters. For availability, please check with your supplier.

Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>3300 SERIES - cont'd.</b>					
43308AB	1.5748	3.5433	.9055	.9055	.030 R. Bore Corners
Z9608P	1.5748	3.5433	.9055	.9055	Modified for No Drag Seal
3309-8	1.5748	3.9370	.9843	.9843	Special Bore
Z9609C	1.7717	3.9370	.9843	.9843	Modified for No Drag Seal
43309A41	1.6250	3.9370	.9843	.9843	Special Bore
77610B	1.9685	4.3307	1.0630	1.0630	Stabilized
SSQ3311G	2.1654	4.7244	1.1417	1.1417	Nylon Separator - 1.300 Width Over Rivets
7612C	2.3622	5.1181	1.2205	1.2205	Stabilized
9612B	2.3622	5.1181	1.2205	1.2205	Modified for No Drag Seal
43312A	2.3622	5.1181	1.2205	1.2205	No Shield Notches in I.R.
V3314B	2.7559	5.9055	1.3780	1.3780	Split I.R. - Bronze Separator - O.D. Rib 1.150 Wide
V3314C	2.8750	5.9055	1.3780	1.3780	Split I.R. - Bronze Separator - O.D. Rib 1.150 Wide
77615A	2.9528	6.2992	1.4567	1.4567	Stabilized
Q3317A	3.3465	7.0866	1.6142	1.6142	Stabilized
3318A	3.5277	7.4803	1.6929	1.6929	Special Bore
V3318B	3.5433	7.4803	1.6929	1.6929	Split Inner Ring - Bronze 1 Pc. Separator
<b>3400 SERIES</b>					
Q3403A	.6693	2.4410	.6693	.6693	Special Non-metallic Separator
3404	.7874	2.8346	.7480	.7480	Standard Bearing - Cap. 1960 lbs.
3405	.9843	3.1496	.8268	.8268	Standard Bearing - Cap. 2300 lbs.
77705B	.9843	3.1496	.8778	.8778	Special Width
3406	1.1811	3.5433	.9055	.9055	Standard Bearing - Cap. 2700 lbs.
3407	1.3780	3.9370	.9843	.9843	Standard Bearing - Cap. 3100 lbs.
3408	1.5748	4.3307	1.0630	1.0630	Standard Bearing - Cap. 3500 lbs.
3409	1.7717	4.7244	1.1417	1.1417	Standard Bearing - Cap. 4300 lbs.
3410	1.9685	5.1181	1.2205	1.2205	Standard Bearing - Cap. 4800 lbs.
3411	2.1654	5.5118	1.2992	1.2992	Standard Bearing - Cap. 5200 lbs.
3412	2.3622	5.9055	1.3780	1.3780	Standard bearing - Cap. 5700 lbs.
<b>1200 SERIES</b>					
F1202	.5906	1.3780	.4331	.4331	Full Ball Complement (No Separator)
47207CU	1.3780	2.8346	.6693	.6693	Shield Fixed to Inner Ring
41211A	2.1654	3.9370	.680	.680	Special Width - Special Snap Ring 4.08 O.D.
1212C	2.3622	4.3307	1.024	.8661	I.R. Extended on Side Opposite Loading Groove
1213A	2.3622	4.7244	.9055	.9055	Special Bore
1217-75	2.9528	5.9055	1.1024	1.1024	Special Bore
1219-85	3.3465	6.6929	1.2598	1.2598	Special Bore
1222-100	3.9370	7.8740	1.4961	1.4961	Special Bore
<b>1300 SERIES</b>					
41306AV	1.1811	2.8346	.7480	.7480	.020 R. Bore Corners
47306RV	1.1811	2.8346	.7480	.7480	Shield Fixed to Inner Ring
41307B	1.3780	3.1496	.6693	.6693	Special Width
41307FV	1.3780	3.1496	.8268	.8268	Corner Breakouts .005-.020 at Bore
41308A	1.5748	3.5433	.9055	.9055	I.R. has Counterbore 1.654 x .178 Wide
N1311A	2.1654	4.7244	1.1417	1.1417	O.D. Flange 5.093 Dia. x .265 Thick
41311B	2.1654	4.7244	1.1417	1.1417	Special Snap Ring Location .265
7312B	2.3622	5.1181	1.2205	1.2205	Shield on L.G. Side
41312A	2.3622	5.1181	1.2205	1.2205	No Shield Grooves in I.R.
<b>1400 SERIES</b>					
1405	.9843	3.1496	.8268	.8268	Std. Loading Groove Bearing - Cap. 2850 lbs.
7405A	.9843	3.1496	.8268	.8268	Bore corner NLG Side .025 R.
1406	1.1811	3.5433	.9055	.9055	Std. Loading Groove Bearing - Cap. 3600 lbs.
1407	1.3780	3.9370	.9843	.9843	Std. Loading Groove Bearing - Cap. 4150 lbs.
1408	1.5748	4.3307	1.0630	1.0630	Std. Loading Groove Bearing - Cap. 4600 lbs.
1409	1.7717	4.7244	1.1417	1.1417	Std. Loading Groove Bearing - Cap. 5500 lbs.
1410	1.9685	5.1181	1.2205	1.2205	Std. Loading Groove Bearing - Cap. 6100 lbs.
1411	2.1654	5.5118	1.2992	1.2992	Std. Loading Groove Bearing - Cap. 6700 lbs.
1412	2.3622	5.9055	1.3780	1.3780	Std. Loading Groove Bearing - Cap. 7300 lbs.

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### STANDARD AND SPECIAL BALL BEARINGS

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Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>1400 SERIES - cont'd.</b>					
1413	2.5591	6.2992	1.4567	1.4567	Std. Loading Groove Bearing - Cap. 7900 lbs.
1414	2.7559	7.0866	1.6535	1.6535	Std. Loading Groove Bearing - Cap. 9300 lbs.
<b>IRREGULAR 8000 SERIES</b>					
8008B10	.3752	.8749	.386	.315	Special Bore and O.D.
WC8008C	.3150	.9449	.386	.406	Without Seal
WC87008F	.3125	.9449	.3860	.4060	Special Bore
ZWC9011A	.4331	1.2598	.4800	.5000	Sentri-Seal in Place of Felt
RWC8013B	.5118	1.2598	.480	.500	Open Pathway Curvatures
88013D	.5118	1.2606	.6063	.3937	Cadmium Plated Except Bore
C88016B	.6299	1.3780	.5669	.4331	Stabilized
488016D	.6299	1.3780	.5669	.4331	Double "O" Type Seals
<b>4000 SERIES (EXCEPT AGRICULTURAL - PAGE 16)</b>					
4510	1.9685	3.5433	1.188	.7874	3210 with Extended I.R.
4604	.7874	2.0472	.875	.5906	3304 with Extended I.R.
4605	.9843	2.4409	1.000	.6693	3305 with Extended I.R.
4606	1.1811	2.8346	1.188	.7480	3306 with Extended I.R.
4607	1.3780	3.1496	1.375	.8268	3307 with Extended I.R.
4609	1.7717	3.9370	1.563	.9843	3309 with Extended I.R.
4610	1.9685	4.3307	1.750	1.0630	3310 with Extended I.R.
4611	2.1654	4.7244	1.938	1.1417	3311 with Extended I.R.
4613	2.5591	5.5118	2.313	1.2992	3313 with Extended I.R.
4615	2.9528	6.2992	2.688	1.4567	3315 with Extended I.R.
<b>88100 SERIES</b>					
88100	.6263	1.3780	.8125	.4331	Wide I.R. with Face Slots
88106	.817	2.0472	1.625	.5906	88505 with Special Extended I.R. having Tapped Hole
X88107B	1.3780	2.8346	.9843	.6693	88507 with Special Ball Complement and L.R. Seals
88107C	1.3780	2.8346	.9843	.6693	Land Riding Seals
88107CR	1.3780	2.8346	.9843	.6693	88107C Packaged with Axle Ring
88107D	1.3386	2.6772	.9449	.8268	Special with L.R. Seals
88107DR	1.3386	2.6772	.9449	.8268	88107D Packaged with Axle Ring
88107E	1.3780	2.8346	.9843	.6693	88107C with 1Lip Armor-Gard Seals
88107F	1.2505	2.8346	.9843	.6693	88107E with Sph. O.D. and Special Bore
X88107H	1.3780	2.8346	.9843	.6693	88107B with 1Lip Armor-Gard Seals
88107J	1.2505	2.8346	.9843	.6693	88107F with 88107C L.R. Seals
88107P	SPL.	2.8346	.9843	.6693	88107F with 1½ Hex. Bore
88123	1.0000	2.0472	.6594	.5906	88505 with Special Bore
88125	.5000	1.2598	.6063	.3937	88013 with Special Bore
88128	1.5312	3.1496	1.0830	.8268	Special Bearing with L.R. Seals
88128R	1.5312	3.1496	1.0830	.8268	88128 Packaged with Axle Ring
88128RC	1.5312	3.1496	1.0830	.8268	88128 Packaged with Cadillac Axle Ring
<b>RW SERIES</b>					
RW101	1.3780	2.7475	.9843	.6600	Special Bearing - with L.R. Seals
RW101R	1.3780	2.7475	.9843	.6600	RW101 Packaged with Axle Ring
RW506AR	1.3780	2.7475	.9843	.6600	907279 Bearing Packaged with Axle Ring
RW507A	1.3780	2.8900	.7400	.7000	Special Bearing - with Sentri-Seals
RW507AA	1.4370	2.8900	.7400	.7000	RW507G with Forged I.R.
RW507AR	1.4370	2.8900	.7400	.7000	RW507A Packaged with Axle Ring
RW507C	1.3780	2.7475	.7000	.6600	Special Bearing with Sentri-Seals
RW507CR	1.3780	2.7475	.7000	.6600	RW507C Packaged with Axle Ring
RW507E	1.3780	2.8346	.9250	.8858	Special Bearing - Sentri-Seal, Garter Spr. Seal - O.D. "O" Ring
RW507ER	1.3780	2.8346	.9250	.8858	RW507E Packaged with Axle Ring
RW507F	1.3780	2.8346	.9250	.8858	RW507E - No Sentri-Seal - Garter Spr. Seal Reversed
RW507FR	1.3780	2.8346	.9250	.8858	RW507F Packaged with Axle Ring
RW507G	1.4370	2.8900	.7400	.7000	RW507A Except Special Bore
RW507GR	1.4370	2.8900	.7400	.7000	RW507G Packaged with Axle Ring

**New Departure Hyatt**  
**BALL BEARING DIMENSIONAL DATA**

**STANDARD AND SPECIAL BALL BEARINGS**

This list includes some of the NDH Standard and Special Bearings not otherwise tabulated. Some sizes listed also available with standard prefix and suffix letters. For availability, please check with your supplier.

Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>RW SERIES - cont'd.</b>					
<b>RW507R</b>	1.3780	2.8346	.8449	.8449	Special Bearing - Senti-Seals - O.D. has "O" Ring Groove
<b>RW507RR</b>	1.3780	2.8346	.8449	.8449	RW507R Packaged with Axle Ring
<b>0L00 SERIES</b>					
<b>Q0L00A11</b>	.4150	1.0236	.3150	.3150	Special Bore
<b>0L00B</b>	.3937	1.0236	.3150	.3150	Stabilized - ATB Separator - I.R. Snap
<b>QH0L00E</b>	.3937	1.0236	.3150	.3150	Open Pathway Curvatures
<b>Q0L00F</b>	.3937	1.0236	.3150	.3150	.020 R. O.D. Corners
<b>Q0L01B</b>	.4724	1.1024	.3150	.3150	Special Ball Complement - I.R. Separable
<b>Q0L02B</b>	.5906	1.2598	.3543	.3543	Special Ball Complement - I.R. Separable
<b>J0L02C</b>	.5906	1.2598	.3543	.3543	Stabilized - ATB Separator - I.R. Snap
<b>Q0L03B</b>	.6693	1.3780	.3937	.3937	Special Ball Complement - I.R. Separable
<b>Q0L03E</b>	.6693	1.3780	.3937	.3937	O.R. Controlled Separator - Snap, Both Rings
<b>SSQ0L03K</b>	.6693	1.3780	.3937	.3937	I.V.M. B.G. 42 Steel - Special Coating
<b>SSQ0L03KA</b>	.6693	1.3780	.3937	.3937	Special Coating
<b>Q0L04B</b>	.7874	1.6535	.4724	.4724	Special Ball Complement - I.R. Separable
<b>Q0L04P</b>	.7874	1.6535	.4724	.4724	O.R. Controlled Separator - Snap, Both Rings
<b>0L04AA</b>	.7874	1.6535	.4724	.4724	Special Ball Complement - Cobalt Alloy Material
<b>VJL04AD</b>	.7874	1.6535	.4724	.4724	CEVM M50 Material - Silver Plated ISB Sep. - O.R. Face Slot
<b>Q0L05B</b>	.9843	1.8504	.4724	.4724	Special Ball Complement - I.R. Separable
<b>Q0L05BP</b>	.9843	1.8504	.4724	.4724	0L05B with Std. Curvatures
<b>Q0L06B</b>	1.1811	2.1654	.5118	.5118	Special Ball Complement - I.R. Separable
<b>Q0L07E</b>	1.3780	2.4409	.5512	.5512	Open Pathway Curvatures - I.R. Separable
<b>Q0L07H</b>	1.3780	2.4409	.5512	.5512	Special Tolerances
<b>Q0L07P</b>	1.3780	2.4409	.5512	.5512	Special Phenolic Separator
<b>Q0L08B</b>	1.5748	2.6772	.5906	.5906	Open Pathway Curvatures - I.R. Separable
<b>V0L08C</b>	1.5748	2.6772	.5906	.5906	Stabilized
<b>Q0L08BP</b>	1.5748	2.6772	.5906	.5906	0L08B with Standard Curvatures
<b>Q0L10C</b>	1.9685	3.1496	.6299	.6299	Open Pathway Curvatures - I.R. Separable
<b>QJL12C</b>	2.3622	3.7402	.7087	.7087	O.R. Controlled Separator - I.R. Snap
<b>Q0L13B</b>	2.5591	3.9370	.7087	.7087	Open Pathway Curvatures - I.R. Separable
<b>Q0L13BP</b>	2.5591	3.9370	.7087	.7087	0L13B with Standard Curvatures
<b>QH0L15D</b>	2.9528	4.5276	.7874	.7874	Special Ball Complement - 4 Bearing Duplex Set
<b>0L16B98</b>	3.8750	4.9213	.500	.480	Wire Loop Separator
<b>Q0L17F</b>	3.3465	5.1181	.8661	.8661	O.R. Controlled Separator - I.R. Separable
<b>Q0L24BDT</b>	4.7244	7.0866	1.1024	1.1024	Duplex DT Pair - Face Slots in Abutting Faces
<b>Q0L30C</b>	5.9055	8.8583	1.3780	1.3780	O.R. Controlled Sep. - CEVM for Steel Parts - I.R. Separable
<b>0LL00 SERIES</b>					
<b>Q0LL03C</b>	.6693	1.1811	.2756	.2756	O.R. Controlled Separator
<b>H0LL04A</b>	.7874	1.4567	.3543	.4020	CEVM M50 Material - Wide O.R.
<b>V0LL06B</b>	1.1811	1.8504	.3543	.3543	O.R. Controlled I.S.B. Separator
<b>V0LL06E</b>	1.1811	1.8504	.3543	.3543	Special Width Tolerance for Duplex Pair
<b>Q0LL07</b>	1.3780	2.1654	.3937	.3937	Standard Bearing
<b>0LL07B</b>	1.3780	2.1654	.3840	.3840	Separable I.R. - Silver Plated Separator
<b>Q0LL08</b>	1.5748	2.4409	.4724	.4724	Standard Bearing
<b>Q0LL13</b>	2.5591	3.5433	.5118	.5118	Standard Bearing
<b>Q0LL14A</b>	2.7559	3.9370	.6299	.6299	Set of 3 Matched with Oil Grooves O.R. Face
<b>Q0LL15</b>	2.9528	4.1339	.6299	.6299	Standard Bearing
<b>Q0LL17</b>	3.3465	4.7244	.7087	.7087	Standard Bearing
<b>Q0LL24A</b>	4.7500	6.5002	.8750	.8750	Special Bore, O.D. and Width
<b>20200 SERIES</b>					
<b>J202B</b>	.5906	1.3780	.4331	.4331	O.R. Controlled Separator - I.R. Snap - CEVM M50 Material
<b>20202E</b>	.5906	1.3780	.354	.354	Separable I.R.
<b>20202F</b>	.5906	1.3780	.4251	.4251	Premium Steel - Aircraft Inspection
<b>Q20202K</b>	.5906	1.3780	.4250	.3650	Special Widths
<b>20202R</b>	.5906	1.3780	.354	.354	Separable I.R. - I.R. Bore Thrust Corner .008R
<b>Q20202U</b>	.5906	1.3780	.4250	.3300	Special Widths and Ball Complement
<b>Q20203D</b>	.6693	1.5748	.4724	.4724	O.R. Controlled Separator - I.R. and O.R. Snap

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

### STANDARD AND SPECIAL BALL BEARINGS

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Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>20200 SERIES - cont'd.</b>					
Q720203	.6693	1.5748	.4724	.4724	Shield on C'Bore Side
J204D	.7874	1.8504	.5512	.5512	O.R. Controlled Separator - I.R. Snap - CEVM M50 Material
Q20204F	.7874	1.8504	.5512	.5512	Special Ball Complement
V20204G	.7874	1.8504	.5512	.5512	I.S.B. Separator - Duplex Set with O.D. Keeper Ring
Q20205F	.9843	2.0472	.5906	.5906	O.R. Controlled Separator - I.R. and O.R. Snap
SSQ20205P	.9843	2.0472	.5906	.5906	BG42 Material - Special Coating - Stabilized 600°F.
SSQ20205PA	.9843	2.0472	.5906	.5906	Special Coating of Balls and Pathways
Q20206C	1.1811	2.4409	.6299	.6299	Special Ball Complement
VH20206J	1.1811	2.4380	.6299	.6299	Special Ball Complement
Q20207K	1.3780	2.8346	.6693	.6693	O.R. Controlled Separator - I.R. and O.R. Snap
Q20209F	1.7717	3.3465	.7480	.7480	O.R. Controlled Separator - I.R. and O.R. Snap
H420209B	1.7717	3.3465	.9843	.7480	Special Width I.R. - Snap Ring on Snap Side
Q20211F	2.1654	3.9370	.8268	.8268	O.R. Controlled Separator - I.R. and O.R. Snap
Q20213F	2.5591	4.7244	.9055	.9055	O.R. Controlled Separator - I.R. and O.R. Snap
20214A	2.7559	4.9213	.9449	.9449	Full Ball Complement (No Separator)
<b>20300 SERIES</b>					
VJ305A	.9843	2.4409	.6693	.6693	Special Ball Complement - CEVM M50 Matl. - O.R. Cont. Sep.
VJ305D	.9843	2.4409	.6693	.6693	Special Ball Complement - CEVM 52100 Matl. - O.R. Cont. Sep.
H420310B	1.9685	4.3307	1.2205	1.0630	Special I.R. Width - Snap Ring C'Bore Side
<b>20400 SERIES</b>					
H20405	.9843	3.1496	.8268	.8268	Standard Bearing - Cap. 2550 lbs.
H20406	1.1811	3.5433	.9055	.9055	Standard Bearing - Cap. 3250 lbs.
H20407	1.3780	3.9370	.9843	.9843	Standard Bearing - Cap. 3750 lbs.
H20408	1.5748	4.3307	1.0630	1.0630	Standard Bearing - Cap. 4200 lbs.
H20409	1.7717	4.7244	1.1417	1.1417	Standard Bearing - Cap. 5000 lbs.
H20410	1.9685	5.1181	1.2205	1.2205	Standard Bearing - Cap. 5600 lbs.
<b>30200 SERIES</b>					
30204B	.7874	1.8504	.5512	.5512	O.D. Corners Chamfered .062 (Axial) x 15°
VJ205A	.9843	2.0472	.5906	.5906	O.R. Controlled Silver Plated Separator - I.R. Snap
30205B	1.020	2.0472	.5906	.5906	Special Bore - Bore Corner Chfr. Thrust Side
E30210A	1.9685	3.5433	.7960	.7960	Full Ball Complement - Snap Wire Ball Retention
E30213A	2.5591	4.7244	.9140	.9140	Full Ball Complement - Snap Wire Ball Retention
<b>30300 SERIES</b>					
Q30306J	1.1811	2.8346	.7480	.7480	Special Ball Complement
30306AD	1.1811	2.8346	.7480	.7480	Full Type - High Shoulders
SSQ30306AE	1.1811	2.8346	.7480	.7480	BG 42 Material - Coated - Graphite Separator
SSQ30306AF	1.1811	2.8346	.7480	.7480	Coated - Graphite Separator
30311B	2.1654	4.7244	1.1417	1.1417	Machined Steel Separator
30317A	3.3465	7.0866	1.6142	1.6142	Machined Steel Separator
<b>30400 SERIES</b>					
Q30404	.7874	2.8346	.7480	.7480	Standard Bearing - Cap. 1960 lbs.
Q30405	.9843	3.1496	.8268	.8268	Standard Bearing - Cap. 2550 lbs.
Q30406	1.1811	3.5433	.9055	.9055	Standard Bearing - Cap. 2950 lbs.
Q30407	1.3780	3.9370	.9843	.9843	Standard Bearing - Cap. 3400 lbs.
Q30408	1.5748	4.3307	1.0630	1.0630	Standard Bearing - Cap. 4050 lbs.
Q30409	1.7717	4.7244	1.1417	1.1417	Standard Bearing - Cap. 4550 lbs.
Q30410	1.9685	5.1181	1.2205	1.2205	Standard Bearing - Cap. 5000 lbs.
Q30411	2.1654	5.5118	1.2992	1.2992	Standard Bearing - Cap. 5500 lbs.
Q30412	2.3622	5.9055	1.3780	1.3780	Standard Bearing - Cap. 6000 lbs.
Q30413	2.5591	6.2992	1.4567	1.4567	Standard Bearing - Cap. 7000 lbs.
Q30414	2.7559	7.0866	1.6535	1.6535	Standard Bearing - Cap. 8200 lbs.
Q30415	2.9528	7.4803	1.7717	1.7717	Standard Bearing - Cap. 9300 lbs.
Q30416	3.1496	7.8740	1.8898	1.8898	Standard Bearing - Cap. 9900 lbs.

# New Departure Hyatt

## BALL BEARING DIMENSIONAL DATA

### STANDARD AND SPECIAL BALL BEARINGS

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Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>0200 SERIES</b>					
H0203	.6693	1.5748	.3940	.3460	.4724 Width O.A. - 60° Contact Angle
MM0205B	.9843	2.0472	.6693	.5906	Flanged Separable O.R. - Bore Corner Keyway
H0206	1.1811	2.4409	.525	.443	.6299 Width O.A. - 60° Contact Angle
NM0206B	1.1811	2.4409	.7480	.6299	Flanged Separable O.R. - Bore Corner Keyway
NM0207B	1.3780	2.8346	.8268	.6693	Flanged Separable O.R. - Bore Corner Keyway
NM0208B	1.5748	3.1496	.9055	.7087	Flanged Separable O.R. - Bore Corner Keyway
NM0210B	1.9685	3.5433	1.0630	.7874	Flanged Separable O.R. - Bore Corner Keyway
NM0210B-8	1.5746	3.5433	1.0630	.7874	Flanged Separable O.R. - Bore Corner Keyway
NM0212B	2.3622	4.3307	1.2205	.8661	Flanged Separable O.R. - Bore Corner Keyway
NM0214B	2.7559	4.9213	1.3780	.9449	Flanged Separable O.R. - Bore Corner Keyway
NM0214B-13	2.5591	4.9213	1.3780	.9449	Flanged Separable O.R. - Bore Corner Keyway
NM0216B	3.1496	5.5118	1.5354	1.0236	Flanged Separable O.R. - Bore Corner Keyway
NM0216B-15	2.9528	5.5118	1.5354	1.0236	Flanged Separable O.R. - Bore Corner Keyway
NM0218B	3.5433	6.2992	1.6929	1.1811	Flanged Separable O.R. - Bore Corner Keyway
NM0220B	3.9370	7.0866	1.8504	1.3386	Flanged Separable O.R. - Bore Corner Keyway
NM0224B	4.7244	8.4646	2.1654	1.5748	Flanged Separable O.R. - Bore Corner Keyway
QNM0224B-28B	5.5118	8.4646	1.6875	1.5000	Flanged O.R. - Flush on Non-Flange Side
<b>20100 SERIES</b>					
QHN20110	1.9685	3.3465	.7480	.7480	O.D. Flange 3.5433 Dia. x .187 Thick
Q20119	3.7402	5.9055	1.1024	1.1024	Non-Standard Boundary Dimensions
<b>MAGNETO (ND) SERIES</b>					
ND5	.1969	.6299	.1969	.1969	Standard Bearing - Separable O.R.
ND8-6	.2362	.9449	.2756	.2756	Standard Bearing - Separable O.R.
ND8-7	.2756	.9449	.2756	.2756	Standard Bearing - Separable O.R.
ND8	.3150	.9449	.2756	.2756	Standard Bearing - Separable O.R.
ND10	.3937	1.1024	.3150	.3150	Standard Bearing - Separable O.R.
ND12	.4724	1.2598	.2756	.2756	Standard Bearing - Separable O.R.
ND13	.5118	1.1811	.2756	.2756	Standard Bearing - Separable O.R.
ND15	.5906	1.3780	.3150	.3150	Standard Bearing - Separable O.R.
ND15F	.5906	1.3780	.3150	.3150	I.R. and O.R. Separable
ND16	.6299	1.4961	.3937	.3937	Standard Bearing - O.R. Separable
ND17	.6693	1.7323	.4331	.4331	Standard Bearing - O.R. Separable
ND17E	.6693	1.7323	.3937	.3937	Narrow Width - O.R. Separable
ND17F	.6693	1.7323	.3937	.3937	Narrow Width - O.R. and I.R. Separable
ND17H	.6693	1.5748	.3937	.3937	Narrow Width - Special Separable O.D.
ND17J	.6875	1.3754	.4331	.4331	Special Dim. and Ball Complement - Separable O.D.
ND20	.7874	1.8504	.5512	.5512	Standard Bearing - O.R. Separable
<b>AUTOMOTIVE CLUTCH BEARING SERIES CT AND 4L00</b>					
CT22C	1.375	2.813	1.782	.635	W.O.A. 1.813 - I.R. has Fork Groove
CT22E	1.375	2.813	1.546	.695	W.O.A. 1.609 - I.R. has Fork Groove
CT24A	1.500	2.813	.594	.600	W.O.A. .625 - I.R. has Fork Groove
CT24E	1.375	2.813	1.240	.635	W.O.A. 1.270 - I.R. has Fork Groove
CT24H	1.375	2.813	1.240	.698	W.O.A. 1.333 - I.R. has Fork Groove
CT24J	1.375	2.813	1.240	.635	W.O.A. 1.270 - I.R. has Fork Groove
CT24K	1.375	2.813	1.190	.600	W.O.A. 1.220 - I.R. has Fork Groove
CT24AD	1.4375	2.813	1.140	.655	W.O.A. 1.170 - I.R. has Adapter Plate
CT34	2.1355	3.487	.580	.906	.750 Between Thrust Faces
CT34B	1.875	3.487	2.680	.906	W.O.A. 2.810 - I.R. has Fork Groove
CT40	2.5000	4.0750	.875	.906	W.O.A. 1.0625
CT44	2.7500	4.070	.793	.720	.813 Between Thrust Faces
4L24E	4.7244	7.0866	1.750	.7480	I.R. has Fork Groove
<b>DOUBLE ROW 5L00 SERIES</b>					
995L06	1.1811	2.1654	.9062	.9062	Special Width - Sealed
995L06A	1.1811	2.1654	.9062	.9062	995L06 with Extended Seals .040 Each Side
5L11	2.1654	3.5433	1.1811	1.1811	Standard Bearing - Cap. 3300 lbs.

## New Departure Hyatt BALL BEARING DIMENSIONAL DATA

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Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>DOUBLE ROW 5L00 SERIES - cont'd.</b>					
N5L11A	2.1654	3.5433	1.1811	1.1811	Flange O.D. 3.7402 $\phi$ x .197 - Cont. Angle 32° and 12°
5L12	2.3622	3.7402	1.2598	1.2598	Standard Bearing - Cap. 3550 lbs.
5L14	2.7559	4.3307	1.4173	1.4173	Standard Bearing - Cap. 4900 lbs.
N5L14A	2.7559	4.3307	1.4173	1.4173	Flange O.D. 4.5276 $\phi$ x .197 - Cont. Angle 32° and 12°
5L16	3.1496	4.9213	1.5748	1.5748	Standard Bearing - Cap. 6100 lbs.
N5L16A	3.1496	4.9213	1.5748	1.5748	Flange O.D. 5.1378 $\phi$ x .216 - Cont. Angle 32° and 12°
5L18	3.5433	5.5118	1.7323	1.7323	Standard Bearing - Cap. 7300 lbs.
N5L18A	3.5433	5.5118	1.7323	1.7323	Flange O.D. 5.7480 $\phi$ x .236 - Cont. Angle 32° and 12°
5L20	3.9370	5.9055	1.7323	1.7323	Standard Bearing - Cap. 7800 lbs.
N5L20A	3.9370	5.9055	1.7323	1.7323	Flange O.D. 6.1420 $\phi$ x .236 - Cont. Angle 32° and 12°
5L22	4.3307	6.6929	2.0472	2.0472	Standard Bearing - Cap. 10000 lbs.
5L24	4.7244	7.0866	2.0472	2.0472	Standard Bearing - Cap. 104 00 lbs.
N5L24A	4.7244	7.0866	2.0472	2.0472	Flange O.D. 7.3622 $\phi$ x .276 - Cont. Angle 32° and 12°
<b>DOUBLE ROW SELF ALIGNING</b>					
2608	1.5748	3.5433	.9055	.9055	Standard Bearing - Cap. 1220 lbs.
<b>DOUBLE ROW 5200 SERIES</b>					
R55500	.3937	1.1811	.5625	.5625	55500 with Relube Hole in Shields
5501D	.4724	1.2598	.6250	.6250	5501 with Special Face Flushness on Open Side
55501E	.4724	1.2598	.6250	.6250	55501 with O.D. Flange 2.175 $\phi$ x 1.20 Thick
Q5202J	.5906	1.3780	.6250	.6250	5202 Except Nylon Snap-On Separator
Z995202A	.5906	1.3780	.7188	.7188	5202 Except Special Width and Senti-Seals
Z995202B	.6470	1.3780	.7188	.7188	Z995202A with Special Bore
Z995202F	.6250	1.3750	1.0937	1.0937	Special Bore, O.D. and Width
5203E	.6693	1.5748	.6875	.6875	Special .040 R. Corners
45503C	.7188	1.5748	.6875	.6875	Special Bore
SS55503G	.6693	1.5748	.6875	.6875	Special Shield Marking
55503H	.700	1.5748	1.690	.6875	Special Bore - I.R. Extended One Side
Z995203	.6693	1.5748	.8125	.8125	Width and Senti-Seals
Z995204	.7874	1.8504	.9375	.9375	Width and Senti-Seals
Z995204B	.6470	1.8504	.9375	.9375	Special Bore and Width - Senti-Seals
Z995205	.9843	2.0472	.9375	.9375	Width and Senti-Seals
45206F	1.1811	2.4409	.9375	.9375	Two Snap Rings on O.D.
55506H	1.1811	2.4409	.9375	.9375	Special SS Separator
Z995206U	1.1811	2.4409	1.0625	1.0625	Special Width - Senti-Seals
T99F5208E	1.5748	3.1496	1.1875	1.1875	1.210 Width over Seals - Full Ball Complement
45208H	1.5748	3.1496	1.1875	1.1875	Two Snap Rings on O.D.
SS55508G	1.5748	3.1496	1.1875	1.1875	Special Shield Marking
5210WA	1.9685	3.5433	1.1855	1.1855	Special Width and I.R. Face Notch
55510B	1.9685	3.5433	1.1875	1.1875	Two Relube Holes Thru O.R.
55513WB	2.5591	4.7244	1.500	1.500	Stabilized for 350° F.
45214WC	2.7559	4.9213	1.5625	1.5625	1 $\frac{1}{16}$ Ball Row 35° - $\frac{9}{16}$ Ball Row 15°
N5216E	3.1496	5.5118	1.7500	1.7500	O.D. Flange 5.7677 $\phi$ x .2515 Wide - Cont. Angle 32° and 12°
N5220E	3.9370	7.0866	2.3750	2.3750	O.D. Flange 7.421 $\phi$ x .3305 Wide - Cont. Angle 32° and 12°
<b>DOUBLE ROW 5300 SERIES</b>					
55602A	.5906	1.750	.7500	.7500	Special O.D. Semi-Crowned
5308A	1.3780	3.5433	1.4375	1.4375	Special Bore
5310B	1.9685	4.3307	1.7500	1.7500	Marked Opposite Side from Standard
5310WA	1.9685	4.3307	1.875	1.7500	Wide I.R. - Cont. Angles 35° and 20°
5313WA	2.5591	5.5118	2.3125	2.3125	Stabilized
<b>DOUBLE ROW 5400 SERIES</b>					
5407	1.3780	3.9370	1.7500	1.7500	Standard Bearing - Cap. 5700 lbs.
<b>DOUBLE ROW MISCELLANEOUS</b>					
E206	1.1811	2.4409	.750	.750	Special Dimensions
E207	1.3780	2.8346	.875	.875	Special Dimensions
E208	1.5748	3.1496	1.000	1.000	Special Dimensions



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This list includes some of the NDH Standard and Special Bearings not otherwise tabulated. Some sizes listed also available with standard prefix and suffix letters. For availability, please check with your supplier.

Bearing Number	Bore In.	O.D. In.	Width		Description
			I.R. In.	O.R. In.	
<b>DOUBLE ROW INCH SERIES MISCELLANEOUS</b>					
555R3C	.1875	.592	.392	.594	Special D.R. R-Ser. - O.D. had 3" Crown
555R4B	.2500	.6250	.5620	.5000	Special D.R. R-Ser. - Two Shields
555R4C	.2500	.750	.5620	.5620	Special D.R. R-Ser. - O.D. has 3" Crown
Z995R4B	.2500	.6250	.5620	.5000	Special D.R. R-Ser. - Senti-Seals
Z995R4C	.2500	.750	.5620	.5620	Special D.R. R-Ser. - O.D. has 3" Crown
<b>FLAT THRUST BALL BEARINGS</b>					
SSFT4	.250	.620	-	-	W.O.A. .280 - Large Ring I.D. .266
SSFT4A	.250	.740	-	-	W.O.A. .280 - Large Ring I.D. .266 - Small Ring O.D. .620
SSFT4B	.2511	.620	-	-	W.O.A. .280 - Large Ring I.D. .266
<b>MISC. NON-DESCRIPTIVE NUMBERS</b>					
900537	.753	.20472	1.053	.700	See Page 19
900539	.753	2.0472	.640	.700	See Page 19
900623	3.2676	4.2676	.760	.340	Wide I.R. has Puller Groove - Wire Loop Separator
904278	1.3780	3.0000	.905	.905	Inward Facing Garter Spr. Seal - O.D. has "O" Ring
905969	-	2.0472	1.053	.700	See Page 19 for 900537 on Stud
905970	-	2.0472	1.053	.700	See Page 19 for 900537 on Stud
907071	1.3780	3.000	.905	.905	904278 Packaged with Axle Ring
907163	.5118	1.2598	.3937	.3937	77501 with Special Bore
907194	.7503	2.297	1.365	1.310	Double Row-Full Ball Type - Flat Pulley - Ribs 1.6250
907225	1.6250	3.2677	1.0236	1.0136	Senti-Seal and Shield
907246	1.5748	3.5433	.9055	.9055	41308 without Snap Ring
907257	1.5748	2.4409	.8120	.8120	Double Row Bearing - Two No-Drag Seals
907279	1.2500	2.5625	.7293	.6693	Shield and Senti-Seal
907358	1.3700	1.8845	.625	.565	Double Row Bearing - Two L.R. Senti-Seals
907395	.3750	.5625	.1720	.1720	Full Ball Complement - O.R. C'Bored
907473	-	1.8504	.812	.5512	See Page 19 - Bearing on Stud
907659	-	2.0472	.640	.700	See Page 19 - 900539 Bearing on Stud
907770	2.0000	3.6600	2.062	1.781	Double Row Bearing - Two L.R. Seals
907814	-	1.1875	-	1.063	Special D.R. Bearing on .4682 ø Shaft - L.O.A. 1.719
907815	-	1.1250	-	1.063	As 907814 Except Complementary Form O.D.
907993	2.1654	3.9370	.680	.680	41211A Packaged with Special Slinger
908188	-	2.0472	.640	.700	See Page 19 for 900539 Bearing on Stud
909001	.7503	2.0800	.595	.608	W.O.A. .708 - Auto. Front Wheel Bearing
909021	.6875	1.8750	.563	.563	W.O.A. .688 - Auto. Front Wheel Bearing
909022	1.1250	2.5000	.844	.625	W.O.A. .984 - Auto. Front Wheel Bearing
909025	.8440	2.2500	.659	.690	W.O.A. .790 - Auto. Front Wheel Bearing
909026	1.4065	3.1496	.917	.851	W.O.A. 1.226 - Auto. Front Wheel Bearing
909040	1.2504	2.5635	.750	.563	W.O.A. .759 - Auto. Front Wheel Bearing
909041	.7503	1.9390	.595	.500	W.O.A. .650 - Auto. Front Wheel Bearing
909045	.9065	2.2500	.659	.690	W.O.A. .790 - Auto. Front Wheel Bearing
909047	.9065	2.2500	.590	.480	W.O.A. .790 - Auto. Front Wheel Bearing
909048	1.5000	3.1496	.700	.650	W.O.A. .900 - Auto. Front Wheel Bearing
909052	1.2815	2.9630	.870	.770	W.O.A. 1.145 - Auto. Front Wheel Bearing
909060	1.3750	2.8125	.850	.625	W.O.A. 1.062 - Auto. Front Wheel Bearing
909062	1.3750	2.9630	.870	.770	W.O.A. 1.145 - Auto. Front Wheel Bearing
909065	.8440	2.2500	.590	.690	W.O.A. .790 - Auto. Front Wheel Bearing
909066	1.3750	2.9630	.645	.570	W.O.A. .760 - Auto. Front Wheel Bearing
909067	.7503	2.0800	.470	.470	W.O.A. .708 - Auto. Front Wheel Bearing
909070	1.2504	2.6500	.700	.515	W.O.A. .800 - Auto Front Wheel Bearing
909072	1.3750	2.9630	.695	.770	W.O.A. .770 - Auto. Front Wheel Bearing
909073	.8440	2.2500	.590	.480	W.O.A. .790 - Auto. Front Wheel Bearing
5666683	1.131	1.5000	-	.306	Outer Ring for 5666693 - Separable Type
5666693	.804	1.36	-	.353	Separator and Ball Assembly 10- <sup>9</sup> / <sub>32</sub> Balls
5673272	1.514	2.1895	-	3.06	Outer Ring - Separable Type
5693941	1.0100	1.218	.300	-	Separable I.R. - Used with 5696210
5696210	1.1030	1.570	-	.289	O.R. and Ball Assembly - Used with 5693941
5698407	.8472	1.3750	-	.325	Outer Ring and Ball Assembly
5698422	.7513	.979	.300	-	Inner Ring for 5698407

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## SPECIAL SPECIFICATIONS

### FOUR DIGIT SPECIFICATIONS

The following partial list of four digit specifications is intended for identification guidance only. The list does not imply availability nor is it intended to encourage the use of four digit specifications which in many cases are deviations from normal production. The first of the four digits in the specification number describes the ABEC tolerance grade but in combination specifications, only the first digit of the basic specification describes the tolerance. For example, specification 7218 includes: 7 (ABEC-7 tolerances); special radial play; plus the requirements listed in specifications 1245, 1272, 3040 and 5097.

SPEC. NO.	AFBMA GRADES	SPECIFIC BEARING	DESCRIPTION
1212	1-3		Free running felts
1213	1-3-5-7		Ring width tolerance + .000/- .002
1214	1		Mark internal fit symbol on bearing
1217	1	5000 Type	Special tolerances
1218	1	DR	Flush within .0005 on non-stamped side under endplay load
1224	1-3-5-7		Standard sound test plus specification 1228
1225	1-3-5		Quieter and smoother than standard (sizes up through 5 bore)
1226	1		Omit one seal
1227	1-3-5-7	SR	Single row radial bearing flush one side for duplex DB
1228	1-3-5-7		Solvent clean, hand spin test
1229	1-3-5-7		Extra smooth 1228 specification
1232	1-3-5-7		Non stamped I.R. face lapped
1239	1		Mark complete NDH number (without spec.)
1241	1-3		Omit snap ring
1244	1-3		Ship bearing with unmounted snap ring
1245	1-3-5-7		Mark high points of eccentricity on both rings
1248	1-3		I.R. bore within $d_{mp}$ limits ( $d_{max}$ $d_{min}$ not allowed)
1250	1		Spec. 1241 plus special sound level
1253	1-3-5-7		Bore and O.D. classified
1254	1-3-5-7		Bore classified
1255	1-3-5-7		O.D. classified
1256	1-3-5-7		Combination specs. 1228 and 1253
1260	1		Special quietness requirements
1266	1-3-5-7		Standard sound test solvent clean
1268	1-3-5-7		Seal black polyacrylic for operation to 325°F.
1269	1	Pumpshaft	Double "O" molded rubber seals
1270	1-3-5-7		Electric motor sound quality (6 bore and up)
1272	1-3-5		Minimum seal drag
1279	1-3		Etch grease code letter (on grade 3, add internal fit symbol, i.e., XR3E
1281	1-3		Special snap ring groove parallelism req.
1286	1-3-5-7-9		Bore and O.D. corners blended
1293	1-3-5		Omit seals and/or shields
1296	1-3		Spec. 1248 for C8000 type bearings
1304	1		Spec. 1214, 1268 and 1279
1305	1	Adapter	Omit seal on locking collar side
1320	1	FL flanges	Zinc plate
1332	1		Combination spec. 1270 and 1272
1336	1	DR	Special I.R. width tolerance and bore corner breakout
1338	1		Special I.R. stickout plus spec. 1245
1340	1	DR	Runout tolerance outer ring pathway to face .0003
1342	1		Black oxide coated, seals per spec. 1268
1347	1	Pumpshaft	Spec. 1269, radial play .0003-.0011.
1354	1	SR	75% grease fill from non-stamped side plus specification 1227
1376	1		Endplay .0095/.0115 plus spec. 1250
1377	1		Lectro etch customer part number and revision letter
1382	1	Pumpshaft	Radial play .0003/.0011, special shaft tolerances, spec. 1269
1387	1		Combination 1214 and 1239
1406	1	SR	Specs. 1224 and 1227 except ground both sides for DT, etch "V" on O.D.
1426	1		Specs. 1225 or 1270 plus 1466
1428	1	Adapter	Set screw to Gov. specs.
1437	1		Omit seals, electro etch O.D. "NDH Made in USA"
1450	1	DR	On non-stamped side, O.R. face protrudes .000/.002
1466	1		Fluoroelastomer Senti Seal for high temp.
1468	1-3		I.R. face stickout beyond closure .005 min. with endplay removed
1474	1		"C" grease special fill plus spec. 1266
3040	3-5-7		Measured dimension code in half tenths
5097	5-7-9		Extra smooth and quiet test
7218	7		Radial play .0012/.0017 plus specs. 1245, 1272, 3040 and 5097

# New Departure Hyatt BALL BEARING ENGINEERING DATA

## STANDARD NDH LUBRICANT PRACTICE

### SLUSH OR GREASE CODE

STANDARD LUBRICANTS and CORROSION PREVENTIVES used in each type and size range of New Departure Hyatt Bearings. The code letters are the last letters in the bearing part number suffix. A numeral or letter appearing after the lubricant letter indicates some variance from standard. (See bottom of page 51.)

Brg. Type	Series	Closures	Bore Size Range (unless otherwise specified)				Std. Lube Code <sup>④</sup>	Std. Fill % <sup>①</sup> <sup>③</sup> <sup>④</sup>	
			L00 Series	200 Series	300 Series	400 Series			
BALL BEARINGS	M E T R I C	Single Row	X				X		
		Double Row <sup>③</sup> <sup>②</sup>	X				X		
		(30 Series and Irreg. 8000 use "200" Ser. Column)	Open	All	All	All	All	A	—
		One Shield	10-29 mm	4-29 mm	10-24 mm		EL	50	
		One Seal	30 mm up	30 mm up	25 mm up	20 mm up	A	—	
		Two Seals or Shields	10-49 mm	4-39 mm	10-34 mm	20-24 mm	EL	50	
			50 mm up	40 mm up	35 mm up	25 mm up	EL	50	
	I N C H	R Series	Open	All				A	—
			One Closure	R2 - R14				EL	50
			Two Closures	R16 - R24				A	—
				R2 - R4A				EL	40
	A U T O	CT (Clutch) Pumpshaft Rear Wheel	Closed	All				RV	60
				All				RV	45
				All				HA	40
	F A R M	Adapter Cam Follower Idler Pulley L. Duty Disc H. Duty Disc	Closed	All				Z	40
				All				Z	75
				All				Z	75
				All				Z	75
				All				Z	90
				All				Z	75
	⑤	Textile <sup>⑥</sup>	One Closure	TP21				RV	75
				TP25				C	75
				TP824				C	45
Two Closures			All TM				C	40	
			TP15				C	40	
			All R88000				C	40	
			TP20.TP30A				C	75	

**NOTES**

- ① If other than standard grease is specified, standard volume applies unless otherwise noted. If grease is specified where A or J slush is standard, the amount is 50% for open and single closure bearings.
- ② Single row bearings with WD separators and double row bearings are lubricated with 1/2 of total grease on each side of bearing.
- ③ Cartridge Bearings (Z99800, Z99900, etc.) have 50% fill.
- ④ Bearings released under the standard spec. program are available only with the amount and type of grease specified in these columns.
- ⑤ For conveyor and hay rake tine bar bearings, see individual part drawings.
- ⑥ TS-2 is filled 100% full of Code "C".

### STANDARD BALL BEARING GREASES AND OILS

Ball bearings rely on lubricants principally to prevent metal to metal contact of components wherever it may occur. Proper separator function depends largely on efficient lubrication. In addition, lubricants conduct heat away from heavily loaded areas, and prevent corrosion of bearing parts. Coupled with efficient seals as in New Departure sealed-for-life bearings, lubricants must be long-lived to assure constant and adequate lubrication to the bearing. The following list covers NDH lubricant codes frequently used.

NDH Code	Lubricant	Temperature (°F)	Major Characteristics
A	Rust inhibitor	.....	Soft, semi-fluid oxidation inhibited rust preventive for general use.
B	Sodium soap-mineral oil grease	— 30° to 250°	Noise reduction at light loads. Good rust prevention under humid conditions.
C	Sodium soap-mineral oil grease	— 30° to 250°	General purpose. Combines good rust prevention under humid conditions with lubricating qualities covering a wide temperature range.
CJ	Microgel thickened diester grease	— 100° to 250°	Low temperature. Water resistant. Satisfactory with Buna N seals, not to be used with polyacrylic or rubber seals.
E	Lithium soap-diester grease	— 65° to 250°	Low temperature. Water resistant. Satisfactory with Buna N seals, not to be used with polyacrylic or rubber seals.
EL	GM 9885371	— 30° to 300°	NDH Preferred Standard
HA	Lithium thickened mineral oil.	— 30° to 225°	Sound level very good. Rust protection very good. Good torque and load carrying characteristics.
J	Diester oil	— 67° to 250°	Instrument oil. Satisfactory with Buna N seals, not to be used with polyacrylic or rubber seals.
RV	Polyurea thickened mineral oil.	— 30° to 300°	Very good rust protection. Life at 250° F. and up-good. Sound level good.
Z	Lithium soap-mineral oil grease	— 30° to 225°	Water resistance very good. Good at high speed.

The following numbers (except 9) or a letter following the lubrication letter or letters indicate the oil or grease lubrication volume for volumes other than standard. Example: 7505X1C3 means ¼ full of C grease.

2. Indicates 1/6 to 1/8 full of grease specified.
3. Indicates 1/4 full of grease specified.
4. Indicates 40% full of grease specified.
5. Indicates 50% full of grease specified.
6. Indicates 30% full of grease specified.
8. Indicates 75% full of grease specified.
9. Indicates special washing, rinsing and handling with clean gloves.  
(Details furnished on request.)
- F Indicates 100% full of grease specified.

# New Departure Hyatt BALL BEARING ENGINEERING DATA

## BALLBEARING IDENTIFICATION

New Departure Hyatt ball bearing identification numbers consist of the BASIC NUMBER with prefixes and suffixes.

**the basic number** or "Catalog Number" consists of three significant parts:

- (A) Bearing Type (design features)
- (B) Bearing Series (dimensional proportions)
- (C) Bore Size (See illustration)

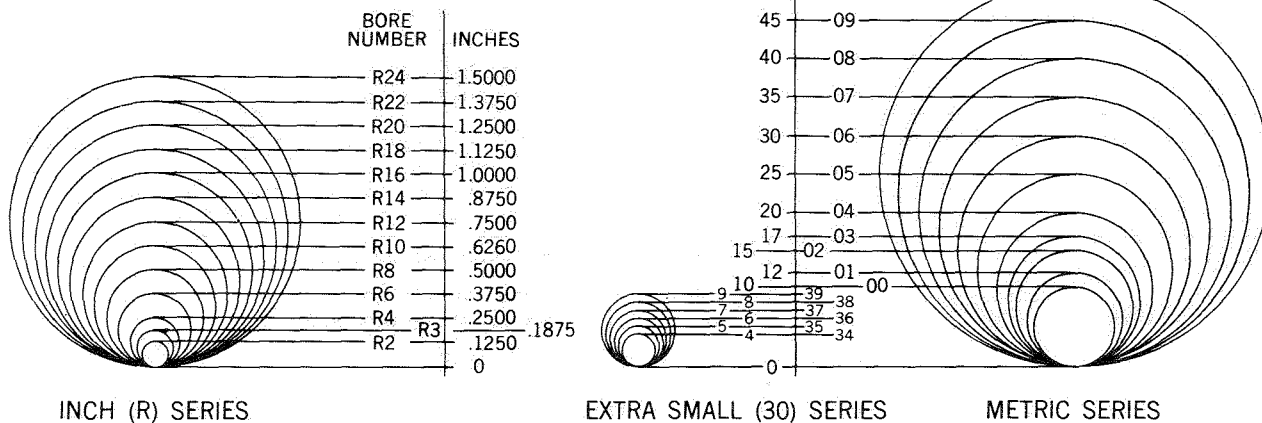
### examples:

TYPE SERIES BORE	TYPE SERIES BORE	TYPE SERIES BORE
A B C	A B C	A B C
3 L 08	3 2 12	5 3 06

Prefixes and Suffixes identify variations or derivative features which modify the Basic Number:

TYPE SERIES BORE	TYPE SERIES BORE	TYPE SERIES BORE
A B C	A B C	A B C
Z93 L 08	Z497 5 12V	55 6 06W

### RELATIVE BORE SIZES



In Inch (R) Series, the bearing numbers represent the bearing bore size in 16ths of an inch.

In Extra Small (30) Series, the last digit of the bearing number is the bore size in millimeters.

In Standard Metric Series bearings the last two digits represent one-fifth of the bore diameter in millimeters for 04 bore (= 20 mm.) and all larger sizes. Below 04 bore the diameters are as follows: 03 = 17 mm., 02 = 15 mm., 01 = 12 mm., 00 = 10 mm.

## prefix numbers and letters

- 4 — Snap Ring or O.D. Groove
- 5 — Shield - Double Row Bearing
- 7 — Shield - Single Row Bearing
- 8 — Felt Seal or Sealed Bearing with equivalent dimensions
- C8 — Metallic Slinger Seal
- 9 — Diaphragm Seal, Notch-Riding, Usually Rubber
- Z9 — Senti Seal

H - 25° Angular Contact Bearing

Q — Non-metallic Separator

SS — Stainless Steel Bearing

V — Bronze Separator — (machined)

WC — Wide Outer Ring

CWC — Combination of C8 and WC

## suffix letters

- DT — Angular Contact - flush ground for duplexing
- W — Double Row Bearing with internally converging contact angles
- V — Snap Ring location opposite standard illustrated in catalog

## BALL BEARING IDENTIFICATION

Examples of Typical Ball Bearing Numbers

DESCRIPTION	BEARING NUMBER		
	A	B	C
BEARING TYPE — DESIGN FEATURES	SERIES	BORE SIZE	TYPE SERIES BORE
Single row, radial, non-loading groove, open	inch	.5000"	— R 8
Single row, radial, non-loading groove, single shield	inch	.5000"	7 R 8
Single row, radial, non-loading groove, open	extra small	8mm.	— 3 8
Single row, radial, non-loading groove, single shield	extra small	6mm.	7 03 6
Single row, radial, non-loading groove, double shield	extra small	7mm.	77 03 7
Single row, radial, non-loading groove, single Senti-Seal	extra small	6mm.	Z9 03 6
Single row, radial, non-loading groove, single felt seal	extra small	5mm.	8 03 5
Single row, radial, non-loading groove, open	extra light	10mm.	3 L 00
Single row, radial, non-loading groove, shield and Senti-Seal	extra light	12mm.	Z973 L 01
Single row, radial, non-loading groove, open	light	15mm.	3 2 02
Single row, radial, non-loading groove, single shield	light	17mm.	7 5 03
Single row, radial, non-loading groove, single felt seal	light	20mm.	8 5 04
Single row, radial, non-loading groove, felt seal, shield	light	25mm.	87 5 05
Single row, radial, non-loading groove, double felt seals	light	30mm.	88 5 06
Single row, radial, non-loading groove, double diaphragm seals	light	35mm.	99 5 07
Single row, radial, non-loading groove, single Senti-Seal	light	35mm.	Z9 5 07
Single row, radial, non-loading groove, double Senti-Seals	light	35mm.	Z99 5 07
Single row, radial, non-loading groove, snap ring, Senti-Seals	light	35mm.	Z499 5 07
Single row, radial, non-loading groove, snap ring, single shield	light	35mm.	47 5 07
Single row, radial, non-loading groove, snap ring, single felt seal	light	30mm.	48 5 06
Single row, radial, non-loading groove, snap ring, felt seal, shield	light	30mm.	487 5 06
Single row, radial, non-loading groove, snap ring, felt seals	light	30mm.	488 5 06
Single row, radial, loading groove, open	medium	35mm.	1 3 07
Single row, radial, loading groove, double shield	medium	45mm.	77 3 09
Single row, radial, loading groove, open	light	30mm.	1 2 06
Single row, radial, loading groove, single shield	light	60mm.	7 2 12
Single row, radial, loading groove, double shield	light	60mm.	77 2 12
Single row, angular contact 25° contact angle, non-metallic separator	extra light	35mm.	QH0 L 07
Single row, angular contact 25° contact angle	extra light	30mm.	H0 L 06
Single row, angular contact 15° contact angle	extra light	60mm.	0 L 12
Single row, angular contact 15° contact angle	light	50mm.	20 2 10
Single row, angular contact 25° contact angle	light	50mm.	H20 2 10
Single row, angular contact 35° contact angle	medium	60mm.	30 3 12
Double row, open-contact angles converge outside bearing	light	50mm.	5 2 10
Double row, open-contact angles converge inside bearing	medium	50mm.	5 3 10W
Double row, single shield, contact angle converging outside bearing	light	35mm.	5 5 07
Double row, single shield, contact angle converging outside bearing	medium	35mm.	5 6 07
Double row, double shield, contact angle converging outside bearing	medium	35mm.	55 6 07
Double row, double Senti-Seal, contact angle converging outside bearing	light	25mm.	Z995 2 05

# New Departure Hyatt

## BALL BEARING ENGINEERING DATA

### PREFIXES AND SUFFIXES

#### BALL BEARING PREFIX, SUFFIX LETTERS, AND NUMBERS

The lists which follow represent significant and nonsignificant prefix and suffix letters (and numbers) now in general usage as part of the bearing number. These lists do not imply availability.

##### Significant Prefix Letters

<b>A</b>	External garter spring seal - pumpshaft, impeller end.	<b>PF</b>	Agricultural idler unit for flat belt.
<b>A</b>	Adapter bearing, no seals, industry standard widths, eccentric locking collar.	<b>PV</b>	Agricultural idler unit for V belt.
<b>AB</b>	Adapter bearing with wide I.R., industry standard widths, set screw locking type.	<b>Q</b>	Nonmetallic separator - any nonmetallic material of any configuration.
<b>AS</b>	Disc Harrow Bearing with agricultural type seal.	<b>R</b>	Inch Series bearing with separator and/or bearing having provision for relubrication.
<b>B</b>	Internal garter spring seal - pumpshaft.	<b>RA</b>	Adapter bearing type A with relube holes, no seals.
<b>C</b>	Steel slinger replaces felt in 8000 type seal.	<b>RAS</b>	Heavy duty Disc Harrow seal bearing with relube holes in O.D. of outer ring.
<b>CB</b>	Conveyor bearing.	<b>RFL</b>	Pressed metal flange pair with lubrication fitting used on relube type spherical O.D. bearing.
<b>CF</b>	Cam Follower bearing.	<b>RG</b>	Adapter bearing RA plus relube groove.
<b>CS</b>	Conveyor stub shaft.	<b>RGLA</b>	Adapter bearing RLA plus relube groove.
<b>CT</b>	Clutch Throwout bearing.	<b>RGTA</b>	Adapter bearing RTA plus relube groove.
<b>CWC</b>	Combination of prefix C and prefix WC (See individual descriptions).	<b>RGWA</b>	Adapter bearing RWA plus relube groove.
<b>D</b>	Rear Wheel type seal (steel slinger and felt) but also applied to some land riding seal bearings replacing D seal bearings.	<b>RGWAB</b>	Adapter bearing RWAB plus relube groove.
<b>F</b>	Angular Contact bearing with Single row (3000 type) internal fit up and faces flush within .005.	<b>RLA</b>	Adapter bearing LA except with relube holes on O.D. on side opposite eccentric collar.
<b>F</b>	All full type (no separator) bearings with loading grooves.	<b>RP</b>	Pumpshaft bearing with one ball row and one roller row.
<b>FL</b>	Pressed metal flange mount, used in pairs on a spherical O.D. bearing.	<b>RS</b>	Removable closure.
<b>G</b>	Outer ring O.D. groove other than snap ring (lubrication groove, etc.).	<b>RTA</b>	Adapter bearing same as TA except with relube holes on O.D.
<b>H</b>	25° contact angle 0LL00, 0L00, and 20000 series.	<b>RW</b>	Rear Wheel bearing.
<b>J</b>	Angular Contact bearing with the snap on the inner ring instead of the outer ring.	<b>RWA</b>	Adapter bearing, WA except with relube holes on O.D. on side opposite eccentric collar.
<b>L</b>	Land riding Armor-gard single lip narrow series seal.	<b>RWAB</b>	Adapter bearing, WAB except with relube holes on O.D. on side opposite extended inner ring.
<b>LA</b>	Adapter bearing, type A with above type L seals.	<b>R88A</b>	Sleeve and Nut type Adapter bearing with provision for injection relubrication.
<b>LC</b>	Adapter bearing shipped without eccentric collar.	<b>SR</b>	Used when stainless steel separator is desired in a carbon steel bearing. If used in a bearing having shields or seals, the sheet metal closure parts shall also be stainless steel. SR prefix is not required if the normal standard separator is stainless steel.
<b>MG</b>	Mast Guide bearing series.	<b>SS</b>	Stainless steel.
<b>N</b>	O.R. with flange of standard dimensions.	<b>T</b>	Identifies bearing assembled with a notch-riding Armor-Gard seal other than Adapter or Cam Follower bearing.
<b>ND</b>	Magneto type bearings.	<b>TA</b>	Adapter bearing, Type A with armor-gard seals.
<b>NF</b>	Combination of prefix N and prefix F (See individual descriptions).	<b>TM, TC, TP, TS</b>	signifies various textile bearing types.
<b>NM</b>	Angular contact bearing with flanged separable outer ring.	<b>V</b>	Bronze separator - any <b>machined</b> separator of any configuration made from any of the bronze materials.
<b>P</b>	Pumpshaft bearing. Add seal prefixes such as 88P, 99P, 98P, A99P, AB9P, etc., as required. Example: AB9P800		

┌ Seal at fan end  
 └ Internal seal at impeller end  
 └ External seal at impeller end



## Prefixes and Suffixes — Cont'd

### BALL BEARING PREFIX, SUFFIX LETTERS, AND NUMBERS

<b>WA</b>	Adapter bearing, type A plus wide inner ring and land riding Armor-gard seals.
<b>WAB</b>	Adapter bearing, type AB plus wide inner ring and land riding Armor-gard seals.
<b>WC</b>	Wide outer ring (8000 series bearing).
<b>WD</b>	Two-piece, cylindrical pocket, integral saddle, O.R. controlled, pressed phosphor bronze separator. WD prefix is also applied to two and four piece I.R. controlled separators having bronze clad steel pockets and chain bronze saddles.
<b>X</b>	88000 bearings for automotive propeller shaft applications.
<b>Z</b>	Removable molded synthetic rubber notch riding seals.
<b>ZA</b>	Adapter bearing, Type A with Senti-seals.

#### Significant Prefix Numbers

<b>4</b>	Snap ring groove in O.D.
<b>5</b>	Any double row bearing.
<b>7</b>	Any closure which does not make rubbing contact.
<b>8</b>	Normally applied to felt seals, but also applied to bearings with nonflush face construction similar to an 8000 series bearing having seals of any description, and to pumpshaft specification 1269 seals.
<b>9</b>	Normally a notch riding seal of 9000 or Z9000 type, but also applied to more or less flush face bearings having seals of any description, and to snap-in, molded, land riding pumpshaft seals.

#### Significant Suffix Letters

<b>B</b>	Separable I.R. for some angular contact bearings but generally nonsignificant.
<b>C</b>	Cylindrical O.D. for adapter bearings.
<b>V</b>	Snap ring, snap ring groove, or Adapter bearing O.D. relube feature on opposite side from standard.
<b>W</b>	Double row bearing, externally diverging contact angles.

#### Nonsignificant Suffix Letters

##### A, B, C, D, E, F, H, J, K, P, R, and U

These letters indicate a bearing specialty, and for accounting and other reasons, are the only letters available for such use.

The following specification letters often follow the basic bearing number but are not part of it. Such letters are listed here for reference only.

<b>DB</b>	Duplex, back to back.
<b>DF</b>	Duplex, face to face.
<b>DT</b>	Duplex, tandem (also universally mountable as Duplex DF, DB, or DT).
<b>L</b>	Loose end play or light preload.
<b>LR</b>	Loose radial play.
<b>MR</b>	Minimum radial play.
<b>N</b>	Extra loose end play.
<b>NR</b>	Radial play - looser than LR.
<b>S</b>	Special internal fitup or preload.
<b>T</b>	Tight end play or heavy preload.
<b>X</b>	Standard end play or medium preload.
<b>XR</b>	Standard radial play.
<b>Y</b>	Low speed functional test.
<b>#</b>	No preload requirement.

# New Departure Hyatt BALL BEARING ENGINEERING DATA

## BEARING TOLERANCES

New Departure Hyatt employs bearing tolerances which are within the limits standardized in the ball bearing industry by the Anti-Friction Bearing Manufacturers Association (AFBMA).

For general usage, bearings built to ABEC-1 standards are adequate. ABEC-3 and ABEC-5 grades are employed where smaller tolerances are required to give desired mounting and running characteristics. ABEC-7 and ABEC-9 grades are available for applications which require extreme accuracy such as certain machine tools and instruments.

In the ABEC 1 through ABEC 7 grades, an allowance is made in the bore and O.D. tolerance for a slight amount of taper and out-of-roundness. This allowance is expressed in terms of  $d_{min}$  and  $d_{max}$  diameters, which are the minimum and maximum al-

lowable single diameters for bore and outside diameter dimensions. Tolerances shown in the ABEC 1 through ABEC 7 bearing tolerance tables are for the mean bore diameter,  $d_m$ . The mean diameter is the arithmetical average of the maximum ( $d_{max}$ ) and minimum ( $d_{min}$ ) diameters:

$$d_m = \frac{d_{min} + d_{max}}{2}$$

In accordance with AFBMA standards, an additional allowance is made on the O.D. tolerances of ABEC 1, 3, 5, and 7 grade bearings with closures, to allow for possible minor distortion from closure assembly.

### INNER RING

bore number	† bore diameter (+.0000" to value below)					max. radial runout (inches)				
	ABEC specification no.					ABEC specification no.				
	1	3	5	7	9	1	3	5	7	9
0-3	-.0003	-.0002	-.0002	-.00015	-.00010	.0004 *	.0003 *	.00015	.00010	.00005
4-6	-.0004	-.0002	-.0002	-.00015	-.00010	.0005	.0003	.00015	.00010	.00010
7-10	-.0005	-.0003	-.0002	-.00020	-.00010	.0006	.0004	.00020	.00015	.00010
11-16	-.0006	-.0004	-.0003	-.00020	-.00015	.0008	.0004	.00020	.00015	.00010
17-24	-.0008	-.0005	-.0003	-.00025	-.00020	.0010	.0005	.00025	.00020	.00010
26-30	-.0010	-.0006	-.0004	-.00030	-.00025	.0012	.0006	.00030	.00030	.00010
32-36	-.0010	-.0006	-.0004	-.00030	-.00025	.0012	.0006	.00030	.00030	.00020
<b>bearing number</b>										
34-39	-.0003	-.0002	-.0002			.0003	.0002	.00015		
8006-09	-.0003	-.0002				.0003	.0002			
8011-16	-.0003	-.0002				.0004	.0003			
8026	-.0004	-.0002				.0005	.0003			
R2-R6	-.0003	-.0002	-.0002			.0003	.0002	.00015		
R8-R10	-.0003	-.0002	-.0002			.0004	.0003	.00015		
R12-R18	-.0004	-.0002	-.0002			.0005	.0003	.00015		
R20-R24	-.0005	-.0003	-.0002			.0006	.0004	.00020		

†New Departure bearings are within the out-of-round and taper allowances established by AFBMA.  
\*".0" Bore radial runout .0003 for ABEC-1 and .0002 for ABEC-3.

### OUTER RING

bore number			† outside diameter (+.0000" to value below)					max. radial runout (inches)						
			ABEC specification no.					ABEC specification no.						
			1	3	5	7	9	1	3	5	7	9		
extra-light	light	medium												
0-1	0		-.0004	-.0003	-.0002	-.0002	-.00015	.0006	.0004	.0002	.00015	.00010		
2-5	1-4	0-3	-.0005	-.0003	-.0002	-.0002	-.00015	.0008	.0004	.0002	.00020	.00010		
6-10	5-8	4-7	-.0005	-.0004	-.0003	-.0002	-.00015	.0010	.0005	.0003	.00020	.00015		
11-15	9-13	8-11	-.0006	-.0004	-.0003	-.0003	-.00020	.0014	.0007	.0004	.00020	.00020		
16-20	14-17	12-14	-.0008	-.0005	-.0004	-.0004	-.00020	.0016	.0008	.0004	.00030	.00020		
21-24	18-20	15-17	-.0010	-.0006	-.0005	-.0004	-.00025	.0018	.0009	.0005	.00030	.00020		
26-32	21-28	18-22	-.0012	-.0007	-.0005	-.0004	-.00030	.0020	.0010	.0005	.00040	.00025		
<b>bearing number</b>														
34-39			-.0004 *	-.0003	-.0002			.0006	.0004	.0002				
8006-09			-.0004	-.0003				.0005	.0004					
8011-16			-.0005	-.0003				.0008	.0004					
8026			-.0005	-.0004				.0010	.0005					
R2-R8			-.0004 *	-.0003	-.0002			.0006	.0004	.0002				
R10-R14			-.0005	-.0003	-.0002			.0008	.0004	.0002				
R16-R24			-.0005	-.0004	-.0003			.0010	.0005	.0003				

†New Departure bearings, with or without closures, are within the out-of-round and taper allowances established by AFBMA.  
\*34-R2-R4 diameter tolerance .0003 for ABEC-1.

### RING WIDTH

		ring width +.0000" to minimum shown					
bore number	(metric)	00	01-03	04-10	11-16	17-24	26-36
bore number	(R series)	2-6	8-10	12-24			
bore number	(30 series)	all					
ABEC 1		-.0050	-.0050	-.0050	-.0060	-.0080	-.0100
ABEC 3		-.0050	-.0050	-.0050	-.0060	-.0080	-.0100
ABEC 5		-.0016	-.0032	-.0050	-.0060	-.0080	-.0100
ABEC 7		-.0016	-.0032	-.0050	-.0060	-.0080	-.0100
ABEC 9		-.0010	-.0032	-.0050	-.0060	-.0080	-.0100 *

### RING WIDTH PER BEARING DUPLEX GROUND

ABEC1	-.010	-.010	-.010	-.015	-.015	-.020
ABEC3	-.010	-.010	-.010	-.010	-.015	-.020
ABEC5	-.010	-.010	-.010	-.010	-.015	-.015
ABEC7	-.010	-.010	-.010	-.010	-.015	-.015
ABEC9	-.010	-.010	-.010	-.010	-.015	-.015 φ

\*For bores 32-36, width tol. is -.0120 for ABEC9  
φFor bores 32-36, width tol. is -.020 for ABEC9

## BEARING MOUNTING FITS

### Explanation of Fits

#### Shaft and Housing Fits

In the majority of ball bearing applications, the shaft rotates and the housing is stationary. In some instances, however, such as various pulley and wheel mountings, the shaft is the stationary member. The following rule covers the fits to be used for both cases.

In general, ball bearings should be applied with the rotating ring a firm press or interference fit, and stationary ring a close push fit, the degree of tightness or looseness depending upon the service for which the bearings are intended. This rule is founded upon the following essential facts:

1. Under normal load conditions, a press-fitted ring will not slip or turn on or in a rotating shaft or housing, and wear in the latter parts is thereby avoided.
2. A bearing having one ring push-fitted and not clamped can move axially so as to avoid the imposition of excessive thrust loads, such as might be caused by changes in shaft length due to expansion.
3. General machine assembly may be accomplished with greater ease where one of the bearing rings is a push fit.

The above rule is general and cannot apply exactly to all conditions. Thus, for very heavy, vibratory or rotating loads, mounting fits for **both** shaft and housing would be made tighter. Also, for many precision applications the stationary ring would require closer than a push fit, not only to avoid radial looseness and excessive deflection under load, but to reduce or prevent creep, which in time might result in increased looseness of housing fit.

In the case of single row angular contact bearings to be applied opposed under a definite preload, either spaced apart or abutted as in duplex mountings, the fits frequently depart somewhat from the general rule for the following reason:

When these bearings are preloaded, a slight expansion occurs in the outer ring, which results in a tightening of the housing fit. Thus, in the case of medium size bearings, the housing may be finished to give a very snug push fit for assembly, but when the bearings are preloaded (always after assembly) the ultimate fit may be on the order of .0001" tight. Because of this, adequate rigidity is obtained, yet assembly operations are facilitated.

#### "Expected" and "Theoretical" Fits

In the tables of bearing mounting fits given in this book, it will be noticed that the "theoretical fits" listed represent

the maximum of either tightness or looseness that could be obtained in practice were the bearings, housings and shafts to vary the full limits of their respective tolerances.

Actually, investigation has proved that practically all applications result in fits that are very much more uniform and less extreme than the indicated **possible** in the tables. Where "expected fits" are given, they list, therefore, the results that will normally be obtained in good shop practice. The reason for this uniformity in actual results may best be explained by an example:

For a 7 bore bearing, the standard bore tolerance is + .0000" — .0005", giving limits of 1.3780" — 1.3775". The shaft limits for this size bearing are 1.3784" — 1.3779"; therefore, if bearing and shaft both ran to the extreme limits, it would be possible to obtain fits either .0009" tight or .0001" loose.

With modern precision grinding machines, which very nearly eliminate the human element, bearing bores are held uniformly close, in the case of a standard New Departure Hyatt 7 bore bearing, averaging within 1.3778" — 1.3776."

In grinding a shaft, the operator normally stops as soon as the diameter comes to or just within the shaft high limit, averaging for the seat to take a 7 bore bearing, 1.3783" — 1.3779". With these averages uniformly maintained in good practice, the actual fits obtained for A.B.E.C.-1 or New Departure Hyatt standard specification bearings would be from .0001" to .0007" tight.

#### Tight and Loose Bearings

When a bearing is mounted on a shaft with a press fit, the inner ring expands a certain amount, depending upon the tightness of the fit. As a result, the bearing has less end play or internal looseness after mounting.

For average conditions New Departure Hyatt bearings are supplied with sufficient internal looseness so that, using the recommended press fit, the correct bearing operating fit-up will be uniformly obtained.

There are various applications, however where ball bearings are required to be either tighter or looser than ordinarily supplied. In such cases it is very undesirable to attempt to achieve this difference by mounting the bearing tighter or looser on the shaft. To do so would, in many instances, result in mounting fits which would adversely affect bearing performance. Therefore, in ordering bearings where greater than normal tightness or looseness is indicated, complete details of the application should be stated so that bearings of suitable internal characteristics may be furnished.

## New Departure Hyatt BALL BEARING ENGINEERING DATA

### SHAFT MOUNTING FITS — For A.B.E.C. — 1 Tolerances Metric Single Row Radial, Single Row Angular Contact, Double Row and ND Seal Bearings

(Except Type 30, and ND Seal bearings not to standard single row widths. See page 66.)

The fits given in this table are satisfactory for nearly all general or average bearing applications. However, for some mounting conditions, certain modifications of these fits may be required.

In general, soft shafts; those not having smoothly ground bearing seats, and those subject to very heavy or vibratory loads, need tighter than average fits. Correct fits for any special conditions will be supplied by the New Departure Hyatt Bearings representative.

For explanation of "Expected Fits" listed below, see page 57.

Bearing Bore Numbers	BEARING BORE		SHAFT REVOLVING						SHAFT STATIONARY					
	Diameters		Diameters		Expected Fit		Theoret. Fit		Diameters		Expected Fit		Theoret. Fit	
	Max.	Min.	Max.	Min.	Loose or Tight	Tight	Loose	Tight	Max.	Min.	Max. Loose	Min. Loose	Loose	Tight
0	.3937	.3934	.3939	.3936					.3935	.3932				
1	.4724	.4721	.4726	.4723	.0000L	.0004	.0001	.0005	.4722	.4719	.0004	.0000	.0005	.0001
2	.5906	.5903	.5908	.5905					.5904	.5901				
3	.6693	.6690	.6695	.6692	.0000L	.0004	.0001	.0005	.6691	.6688	.0004	.0000	.0005	.0001
4	.7874	.7870	.7877	.7873	.0000L	.0006	.0001	.0007	.7871	.7867	.0006	.0000	.0007	.0001
5	.9843	.9839	.9846	.9842	.0000L	.0006	.0001	.0007	.9840	.9836	.0006	.0000	.0007	.0001
6	1.1811	1.1807	1.1814	1.1810	.0000L	.0006	.0001	.0007	1.1808	1.1804	.0006	.0000	.0007	.0001
7	1.3780	1.3775	1.3784	1.3779	.0001T	.0007	.0001	.0009	1.3776	1.3771	.0007	.0001	.0009	.0001
8	1.5748	1.5743	1.5752	1.5747	.0001T	.0007	.0001	.0009	1.5744	1.5739	.0007	.0001	.0009	.0001
9	1.7717	1.7712	1.7721	1.7716	.0001T	.0007	.0001	.0009	1.7713	1.7708	.0007	.0001	.0009	.0001
10	1.9685	1.9680	1.9689	1.9684	.0001T	.0007	.0001	.0009	1.9681	1.9676	.0007	.0001	.0009	.0001
11	2.1654	2.1648	2.1659	2.1653	.0001T	.0009	.0001	.0011	2.1649	2.1643	.0009	.0001	.0011	.0001
12	2.3622	2.3616	2.3627	2.3621					2.3617	2.3611				
13	2.5591	2.5585	2.5596	2.5590	.0001T	.0009	.0001	.0011	2.5586	2.5580	.0009	.0001	.0011	.0001
14	2.7559	2.7553	2.7564	2.7558					2.7554	2.7548				
15	2.9528	2.9522	2.9533	2.9527	.0001T	.0009	.0001	.0011	2.9523	2.9517	.0009	.0001	.0011	.0001
16	3.1496	3.1490	3.1501	3.1495	.0001T	.0009	.0001	.0011	3.1491	3.1485	.0009	.0001	.0011	.0001
17	3.3465	3.3457	3.3471	3.3464	.0002T	.0012	.0001	.0014	3.3458	3.3451	.0012	.0002	.0014	.0001
18	3.5433	3.5425	3.5439	3.5432					3.5426	3.5419				
19	3.7402	3.7394	3.7408	3.7401	.0002T	.0012	.0001	.0014	3.7395	3.7388	.0012	.0002	.0014	.0001
20	3.9370	3.9362	3.9376	3.9369					3.9363	3.9356				
21	4.1339	4.1331	4.1345	4.1338					4.1332	4.1325				
22	4.3307	4.3299	4.3313	4.3306	.0002T	.0012	.0001	.0014	4.3300	4.3293	.0012	.0002	.0014	.0001
24	4.7244	4.7236	4.7250	4.7243					4.7237	4.7230				
26	5.1181	5.1171	5.1188	5.1179					5.1173	5.1164				
28	5.5118	5.5108	5.5125	5.5116	.0002T	.0014	.0002	.0017	5.5110	5.5101	.0014	.0002	.0017	.0002
30	5.9055	5.9045	5.9062	5.9053					5.9047	5.9038				
32	6.2992	6.2982	6.2999	6.2990					6.2984	6.2975				
34	6.6929	6.6919	6.6936	6.6927	.0002T	.0014	.0002	.0017	6.6921	6.6912	.0014	.0002	.0017	.0002
36	7.0866	7.0856	7.0873	7.0864					7.0858	7.0849				

### HOUSING MOUNTING FITS — For A.B.E.C. — 1 Tolerances

**Metric Single Row Radial, Single Row Angular Contact, Double Row and ND Seal Bearings**

(Except Type 30, and ND Seal bearings not to standard single row widths. See page 66.)

The fits given in this table are satisfactory for nearly all general or average bearing applications. However, for some mounting conditions, certain modifications of these fits may be required.

In general, soft metal housings, particularly when revolving, and those subject to heavy or vibratory loads, need tighter than average fits. For best results, housings should have a smooth finish such as produced by grinding or reaming.

In practice the actual fits obtained will be closer than those listed under "Theoretical Fits" below. See page 57.

Bearing Bore Numbers			BEARING OUTER DIAM.		HOUSING STATIONARY				HOUSING REVOLVING			
Series			Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
E.L.	L.	M.	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
0			1.0236	1.0232	1.0240	1.0235			1.0236	1.0231		
1			1.1024	1.1020	1.1028	1.1023			1.1024	1.1019		
	0		1.1811	1.1807	1.1815	1.1810	.0001	.0008	1.1811	1.1806	.0005	.0004
2	1		1.2598	1.2593	1.2603	1.2597			1.2598	1.2592		
3	2	0	1.3780	1.3775	1.3785	1.3779	.0001	.0010	1.3780	1.3774	.0006	.0005
		1	1.4567	1.4562	1.4572	1.4566			1.4567	1.4561		
		3	1.5748	1.5743	1.5753	1.5747			1.5748	1.5742		
4	4	2	1.6535	1.6530	1.6540	1.6534	.0001	.0010	1.6535	1.6529	.0006	.0005
5	4	3	1.8504	1.8499	1.8509	1.8503			1.8504	1.8498		
		5	2.0472	2.0467	2.0477	2.0471			2.0472	2.0466		
6	6	4	2.1654	2.1649	2.1659	2.1653	.0001	.0010	2.1654	2.1648	.0006	.0005
7	6	5	2.4409	2.4404	2.4414	2.4408			2.4409	2.4403		
		7	2.6772	2.6767	2.6777	2.6771			2.6772	2.6766		
8	7	6	2.8346	2.8341	2.8351	2.8345	.0001	.0010	2.8346	2.8340	.0006	.0005
9			2.9528	2.9523	2.9533	2.9527			2.9528	2.9522		
10	8	7	3.1496	3.1491	3.1501	3.1495	.0001	.0010	3.1496	3.1490	.0006	.0005
	9		3.3465	3.3459	3.3472	3.3464	.0001	.0013	3.3466	3.3458	.0007	.0007
11	10	8	3.5433	3.5427	3.5440	3.5432	.0001	.0013	3.5434	3.5426	.0007	.0007
			3.7402	3.7396	3.7409	3.7401			3.7403	3.7395		
12			3.9370	3.9364	3.9377	3.9369	.0001	.0013	3.9371	3.9363	.0007	.0007
13	11	9	4.3307	4.3301	4.3314	4.3306			4.3308	4.3300		
14	12	10	4.5276	4.5270	4.5283	4.5275	.0001	.0013	4.5277	4.5269	.0007	.0007
	13		4.7244	4.7238	4.7251	4.7243	.0001	.0013	4.7245	4.7237	.0007	.0007
15	14	11	4.9213	4.9205	4.9221	4.9211	.0002	.0016	4.9214	4.9204	.0009	.0009
			5.1181	5.1173	5.1189	5.1179			5.1182	5.1172		
17	15	12	5.5118	5.5110	5.5126	5.5116	.0002	.0016	5.5119	5.5109	.0009	.0009
18	16	13	5.7087	5.7079	5.7095	5.7085			5.7088	5.7078		
19			5.9055	5.9047	5.9063	5.9053	.0002	.0016	5.9056	5.9046	.0009	.0009
20	17	14	6.2992	6.2982	6.3002	6.2990	.0002	.0020	6.2993	6.2981	.0011	.0011
21	18	15	6.6929	6.6919	6.6939	6.6927	.0002	.0020	6.6930	6.6918	.0011	.0011
22	19	16	7.0866	7.0856	7.0876	7.0864	.0002	.0020	7.0867	7.0855	.0011	.0011
	20		7.4803	7.4791	7.4815	7.4801	.0002	.0024	7.4805	7.4791	.0012	.0014
24	21	18	7.8740	7.8728	7.8752	7.8738	.0002	.0024	7.8742	7.8728	.0012	.0014
25	22	19	8.2677	8.2665	8.2689	8.2675			8.2679	8.2665		
26			8.4646	8.4634	8.4658	8.4644	.0002	.0024	8.4648	8.4634	.0012	.0014
27	24	20	8.8583	8.8571	8.8595	8.8581			8.8585	8.8571		
28			9.0551	9.0539	9.0563	9.0549			9.0553	9.0539		
29	26		9.4488	9.4476	9.4500	9.4486	.0002	.0024	9.4490	9.4476	.0012	.0014
30	23	22	9.8425	9.8413	9.8437	9.8423			9.8427	9.8413		
31			10.2362	10.2348	10.2375	10.2359			10.2364	10.2348		
32	30	24	10.6299	10.6285	10.6312	10.6296	.0003	.0027	10.6301	10.6285	.0014	.0016
33			11.0236	11.0222	11.0249	11.0233			11.0238	11.0222		

## New Departure Hyatt BALL BEARING ENGINEERING DATA

### SHAFT MOUNTING FITS — For A.B.E.C. — 3 Tolerances Metric Single Row Radial, Single Row Angular Contact, Double Row and ND Seal Bearings

(Except Type 30 and ND Seal bearings not to standard single row widths. See page 67.)

The fits given in this table are intended for applications requiring greater accuracy in certain respects than for general use.

Modification for some mounting conditions may be required, such as for very heavy or vibratory loads where somewhat tighter fits are desired.

Correct fits for any special conditions will be supplied by the New Departure Hyatt Bearings representative.

Actually, with these limits, closer fits will be obtained than listed under "Theoretical Fits." See page 57.

Bearing Bore Numbers	BEARING BORE Diameters		SHAFT REVOLVING				SHAFT STATIONARY			
			Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
0	.3937	.3935	.3939	.3936			.3936	.3933		
1	.4724	.4722	.4726	.4723	.0004	.0001	.4723	.4720	.0001	.0004
2	.5906	.5904	.5908	.5905			.5905	.5902		
3	.6693	.6691	.6695	.6692			.6692	.6689		
4	.7874	.7872	.7876	.7873	.0004	.0001	.7873	.7870	.0001	.0004
5	.9843	.9841	.9845	.9842			.9842	.9839		
6	1.1811	1.1809	1.1813	1.1810	.0004	.0001	1.1810	1.1807	.0001	.0004
7	1.3780	1.3777	1.3783	1.3779	.0006	.0001	1.3778	1.3774	.0001	.0006
8	1.5748	1.5745	1.5751	1.5747	.0006	.0001	1.5746	1.5742	.0001	.0006
9	1.7717	1.7714	1.7720	1.7716	.0006	.0001	1.7715	1.7711	.0001	.0006
10	1.9685	1.9682	1.9688	1.9684	.0006	.0001	1.9683	1.9679	.0001	.0006
11	2.1654	2.1650	2.1657	2.1653	.0007	.0001	2.1651	2.1647	.0001	.0007
12	2.3622	2.3618	2.3625	2.3621			2.3619	2.3615		
13	2.5591	2.5587	2.5594	2.5590	.0007	.0001	2.5588	2.5584	.0001	.0007
14	2.7559	2.7555	2.7562	2.7558			2.7556	2.7552		
15	2.9528	2.9524	2.9531	2.9527	.0007	.0001	2.9525	2.9521	.0001	.0007
16	3.1496	3.1492	3.1499	3.1495	.0007	.0001	3.1493	3.1489	.0001	.0007
17	3.3465	3.3460	3.3469	3.3464	.0009	.0001	3.3461	3.3456	.0001	.0009
18	3.5433	3.5428	3.5437	3.5432			3.5429	3.5424		
19	3.7402	3.7397	3.7406	3.7401	.0009	.0001	3.7398	3.7393	.0001	.0009
20	3.9370	3.9365	3.9374	3.9369			3.9366	3.9361		
21	4.1339	4.1334	4.1343	4.1338			4.1335	4.1330		
22	4.3307	4.3302	4.3311	4.3306	.0009	.0001	4.3303	4.3298	.0001	.0009
24	4.7244	4.7239	4.7248	4.7243			4.7240	4.7235		
26	5.1181	5.1175	5.1185	5.1179			5.1177	5.1171		
28	5.5118	5.5112	5.5122	5.5116	.0010	.0002	5.5114	5.5108	.0002	.0010
30	5.9055	5.9049	5.9059	5.9053			5.9051	5.9045		
32	6.2992	6.2986	6.2996	6.2990			6.2988	6.2982		
34	6.6929	6.6923	6.6933	6.6927	.0010	.0002	6.6925	6.6919	.0002	.0010
36	7.0866	7.0860	7.0870	7.0864			7.0862	7.0856		

**HOUSING MOUNTING FITS — For A.B.E.C. — 3 Tolerances**

**Metric Single Row Radial, Single Row Angular Contact, Double Row and ND Seal Bearings**

(Except Type 30, and ND Seal bearings not to standard single row widths. See page 67.)

The fits given in this table are intended for applications requiring greater accuracy in certain respects than for general use.

Modification for some conditions may be required, such as for soft metal housings, particularly when revolving, or those subject to heavy or vibratory loads, where somewhat tighter fits are necessary. Housings should be smoothly finished as by grinding or reaming.

Actual fits with these limits will be closer than listed under "Theoretical Fits" below. See page 57.

Bearing Bore Numbers			BEARING OUTER DIAM.		HOUSING STATIONARY				HOUSING REVOLVING			
Series			Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
E.L.	L.	M.	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
0			1.0236	1.0233	1.0239	1.0235			1.0236	1.0232		
1	0		1.1024	1.1021	1.1027	1.1023	.0001	.0006	1.1024	1.1020	.0004	.0003
			1.1811	1.1808	1.1814	1.1810			1.1811	1.1807		
2	1		1.2598	1.2595	1.2601	1.2597			1.2598	1.2594		
3	2	0	1.3780	1.3777	1.3783	1.3779	.0001	.0006	1.3780	1.3776	.0004	.0003
		1	1.4567	1.4564	1.4570	1.4566			1.4567	1.4563		
	3		1.5748	1.5745	1.5751	1.5747			1.5748	1.5744		
4	4	2	1.6535	1.6532	1.6538	1.6534	.0001	.0006	1.6535	1.6531	.0004	.0003
5	4	3	1.8504	1.8501	1.8507	1.8503			1.8504	1.8500		
	5	4	2.0472	2.0468	2.0476	2.0471			2.0472	2.0467		
6	6	5	2.1654	2.1650	2.1658	2.1653	.0001	.0008	2.1654	2.1649	.0005	.0004
7	6	5	2.4409	2.4405	2.4413	2.4408			2.4409	2.4404		
	7	6	2.6772	2.6768	2.6776	2.6771			2.6772	2.6767		
8	7	6	2.8346	2.8342	2.8350	2.8345	.0001	.0008	2.8346	2.8341	.0005	.0004
9			2.9528	2.9524	2.9532	2.9527			2.9528	2.9523		
10	8	7	3.1496	3.1492	3.1500	3.1495	.0001	.0008	3.1496	3.1491	.0005	.0004
	9		3.3465	3.3461	3.3470	3.3464	.0001	.0009	3.3466	3.3460	.0005	.0005
11	10	8	3.5433	3.5429	3.5438	3.5432	.0001	.0009	3.5434	3.5428	.0005	.0005
12			3.7402	3.7398	3.7407	3.7401			3.7403	3.7397		
13	11	9	3.9370	3.9366	3.9375	3.9369	.0001	.0009	3.9371	3.9365	.0005	.0005
14	12	10	4.3307	4.3303	4.3312	4.3306			4.3308	4.3302		
	13	11	4.5276	4.5272	4.5281	4.5275	.0001	.0009	4.5277	4.5271	.0005	.0005
			4.7244	4.7240	4.7249	4.7243	.0001	.0009	4.7245	4.7239	.0005	.0005
16	14		4.9213	4.9208	4.9218	4.9211	.0002	.0010	4.9214	4.9207	.0006	.0006
17	15	12	5.1181	5.1176	5.1186	5.1179			5.1182	5.1175		
18	16	13	5.5118	5.5113	5.5123	5.5116	.0002	.0010	5.5119	5.5112	.0006	.0006
19			5.7087	5.7082	5.7092	5.7085			5.7088	5.7081		
20	17	14	5.9055	5.9050	5.9060	5.9053	.0002	.0010	5.9056	5.9048	.0006	.0006
21	18	15	6.2992	6.2986	6.2998	6.2990	.0002	.0012	6.2993	6.2985	.0007	.0007
22	19	16	6.6929	6.6923	6.6935	6.6927	.0002	.0012	6.6930	6.6922	.0007	.0007
	20	17	7.0866	7.0860	7.0872	7.0864	.0002	.0012	7.0867	7.0859	.0007	.0007
			7.4803	7.4796	7.4810	7.4801	.0002	.0014	7.4805	7.4796	.0007	.0009
26	22	19	7.8740	7.8733	7.8747	7.8738	.0002	.0014	7.8742	7.8733	.0007	.0009
			8.2677	8.2670	8.2684	8.2675			8.2679	8.2670		
	24	20	8.4646	8.4639	8.4653	8.4644	.0002	.0014	8.4648	8.4639	.0007	.0009
30		21	8.8583	8.8576	8.8590	8.8581			8.8585	8.8576		
	26		9.0551	9.0544	9.0558	9.0549			9.0553	9.0544		
			9.4488	9.4481	9.4495	9.4486	.0002	.0014	9.4490	9.4481	.0007	.0009
32		22	9.8425	9.8418	9.8432	9.8423			9.8427	9.8418		
	30	24	10.2362	10.2354	10.2369	10.2359			10.2364	10.2354		
			10.6299	10.6291	10.6306	10.6296	.0003	.0015	10.6301	10.6291	.0008	.0010
36		26	11.0236	11.0228	11.0243	11.0233			11.0238	11.0228		

## New Departure Hyatt BALL BEARING ENGINEERING DATA

### SHAFT MOUNTING FITS — For A.B.E.C. — 5 Tolerances Metric Single Row Radial, Single Row Angular Contact, and Double Row Bearings

(Except Type 30. See page 68.)

These fits are intended for spindles and other applications requiring considerable rigidity and accuracy.

Obviously these cannot cover all mounting conditions, and where unusual circumstances such as heavy vibratory loads or special preloading, etc., are involved, modified fits should be obtained from the New Departure Hyatt Bearings representative.

Actually, with the limits given, closer fits will be obtained than indicated under "Theoretical Fits" in the table. See page 57.

Bearing Bore Numbers	BEARING BORE Diameters		SHAFT REVOLVING				SHAFT STATIONARY			
			Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
0	.3937	.3935	.3938	.3936			.3936	.3934		
1	.4724	.4722	.4725	.4723	.0003	.0001	.4723	.4721	.0001	.0003
2	.5906	.5904	.5907	.5905			.5905	.5903		
3	.6693	.6691	.6694	.6692			.6692	.6690		
4	.7874	.7872	.7875	.7873	.0003	.0001	.7873	.7871	.0001	.0003
5	.9843	.9841	.9844	.9842			.9842	.9840		
6	1.1811	1.1809	1.1812	1.1810	.0003	.0001	1.1810	1.1808	.0001	.0003
7	1.3780	1.3778	1.3782	1.3779	.0004	.0001	1.3779	1.3776	.0001	.0004
8	1.5748	1.5746	1.5750	1.5747	.0004	.0001	1.5747	1.5744	.0001	.0004
9	1.7717	1.7715	1.7719	1.7716	.0004	.0001	1.7716	1.7713	.0001	.0004
10	1.9685	1.9683	1.9687	1.9684	.0004	.0001	1.9684	1.9681	.0001	.0004
11	2.1654	2.1651	2.1656	2.1653	.0005	.0001	2.1652	2.1649	.0001	.0005
12	2.3622	2.3619	2.3624	2.3621			2.3620	2.3617		
13	2.5591	2.5588	2.5593	2.5590	.0005	.0001	2.5589	2.5586	.0001	.0005
14	2.7559	2.7556	2.7561	2.7558			2.7557	2.7554		
15	2.9528	2.9525	2.9530	2.9527			2.9526	2.9523		
16	3.1496	3.1493	3.1498	3.1495	.0005	.0001	3.1494	3.1491	.0001	.0005
17	3.3465	3.3462	3.3467	3.3464			3.3463	3.3460		
18	3.5433	3.5430	3.5435	3.5432			3.5431	3.5428		
19	3.7402	3.7399	3.7404	3.7401	.0005	.0001	3.7400	3.7397	.0001	.0005
20	3.9370	3.9367	3.9372	3.9369			3.9368	3.9365		
21	4.1339	4.1336	4.1341	4.1338			4.1337	4.1334		
22	4.3307	4.3304	4.3309	4.3306	.0005	.0001	4.3305	4.3302	.0001	.0005
24	4.7244	4.7241	4.7246	4.7243			4.7242	4.7239		
26	5.1181	5.1177	5.1183	5.1179			5.1179	5.1175		
28	5.5118	5.5114	5.5120	5.5116	.0006	.0002	5.5116	5.5112	.0002	.0006
30	5.9055	5.9051	5.9057	5.9053			5.9053	5.9049		
32	6.2992	6.2988	6.2994	6.2990			6.2990	6.2986		
34	6.6929	6.6925	6.6931	6.6927	.0006	.0002	6.6927	6.6923	.0002	.0006
36	7.0866	7.0862	7.0868	7.0864			7.0864	7.0860		



## HOUSING MOUNTING FITS — For A.B.E.C. — 5 Tolerances

**Metric Single Row Radial, Single Row Angular Contact and Double Row Bearings**

(Except Type 30. See page 68.)

The fits in this table are for applications requiring considerable rigidity and accuracy and housing bores should be smoothly finished, as by grinding or reaming. Where conditions exist which require variation in the fits, such as the use of soft metal housings, heavy or vibratory loads, or special preloading, recommendations may be obtained from the New Departure Hyatt Bearings representative.

The actual fits obtained with the limits given will average closer than those listed under "Theoretical Fits" below. See page 57.

Bearing Bore Numbers			BEARING OUTER DIAM.		HOUSING STATIONARY				HOUSING REVOLVING			
Series			Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
E.L.	L.	M.	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
0			1.0236	1.0234	1.0239	1.0236			1.0236	1.0233		
1			1.1024	1.1022	1.1027	1.1024	.0000	.0005	1.1024	1.1021	.0003	.0002
	0		1.1811	1.1809	1.1814	1.1811			1.1811	1.1808		
2	1		1.2598	1.2596	1.2601	1.2598			1.2598	1.2595		
3	2	0	1.3780	1.3778	1.3783	1.3780	.0000	.0005	1.3780	1.3777	.0003	.0002
		1	1.4567	1.4565	1.4570	1.4567			1.4567	1.4564		
	3		1.5748	1.5746	1.5751	1.5748			1.5748	1.5745		
4		2	1.6535	1.6533	1.6538	1.6535	.0000	.0005	1.6535	1.6532	.0003	.0002
5	4	3	1.8504	1.8502	1.8507	1.8504			1.8504	1.8501		
	5	4	2.0472	2.0469	2.0475	2.0472			2.0472	2.0469		
6			2.1654	2.1651	2.1657	2.1654	.0000	.0006	2.1654	2.1651	.0003	.0003
7	6	5	2.4409	2.4406	2.4412	2.4409			2.4409	2.4406		
	7	6	2.6772	2.6769	2.6775	2.6772			2.6772	2.6769		
8			2.8346	2.8343	2.8349	2.8346	.0000	.0006	2.8346	2.8343	.0003	.0003
9	7	6	2.9528	2.9525	2.9531	2.9528			2.9528	2.9525		
	8	7	3.1496	3.1493	3.1499	3.1496	.0000	.0006	3.1496	3.1493	.0003	.0003
10			3.3465	3.3462	3.3468	3.3464	.0001	.0006	3.3465	3.3461	.0004	.0003
11	10	8	3.5433	3.5430	3.5436	3.5432	.0001	.0006	3.5433	3.5429	.0004	.0003
	11	9	3.7402	3.7399	3.7405	3.7401			3.7402	3.7398		
12			3.9370	3.9367	3.9373	3.9369	.0001	.0006	3.9370	3.9366	.0004	.0003
13	11	10	4.3307	4.3304	4.3310	4.3306			4.3307	4.3303		
	13	11	4.5276	4.5273	4.5279	4.5275	.0001	.0006	4.5276	4.5272	.0004	.0003
15			4.7244	4.7241	4.7247	4.7243	.0001	.0006	4.7244	4.7240	.0004	.0003
16	14		4.9213	4.9209	4.9217	4.9212	.0001	.0008	4.9213	4.9208	.0005	.0004
	15	12	5.1181	5.1177	5.1185	5.1180			5.1181	5.1176		
17			5.5118	5.5114	5.5122	5.5117	.0001	.0008	5.5118	5.5113	.0005	.0004
18	16	13	5.7087	5.7083	5.7091	5.7086			5.7087	5.7082		
	17	14	5.9055	5.9051	5.9059	5.9054	.0001	.0008	5.9055	5.9050	.0005	.0004
20			6.2992	6.2987	6.2997	6.2991	.0001	.0010	6.2992	6.2986	.0006	.0005
21	18	15	6.6929	6.6924	6.6934	6.6928	.0001	.0010	6.6929	6.6923	.0006	.0005
22	19	16										
	20	17	7.0866	7.0861	7.0871	7.0865			7.0866	7.0860	.0006	.0005
24			7.4803	7.4798	7.4808	7.4802	.0001	.0010	7.4804	7.4797	.0006	.0006
26	22	19	7.8740	7.8735	7.8745	7.8739			7.8741	7.8734	.0006	.0006
	24	20	8.2677	8.2672	8.2682	8.2676			8.2678	8.2671		
28			8.4646	8.4641	8.4651	8.4645	.0001	.0010	8.4647	8.4640	.0006	.0006
30	24	21	8.8583	8.8578	8.8588	8.8582			8.8584	8.8577		
	26	22	9.0551	9.0546	9.0556	9.0550			9.0552	9.0545		
32			9.4488	9.4483	9.4493	9.4487	.0001	.0010	9.4489	9.4482	.0006	.0006
	28	22	9.8425	9.8420	9.8430	9.8424			9.8426	9.8419		
	30	24	10.2362	10.2357	10.2367	10.2360			10.2364	10.2356		
34			10.6299	10.6294	10.6304	10.6297	.0002	.0010	10.6301	10.6293	.0006	.0007
36	30	26	11.0236	11.0231	11.0241	11.0234			11.0238	11.0230		

## New Departure Hyatt BALL BEARING ENGINEERING DATA

### SHAFT MOUNTING FITS — For A.B.E.C. — 7 Tolerances Metric Single Row Radial and Single Row Angular Contact Bearings

Fits obtained from this table are for precision spindles and other similar parts requiring exceptional accuracy and rigidity in mounting. Bearing seats on shafts must be very accurately and smoothly finished. Where conditions such as heavy or vibratory loads, or special preloading are to be in effect, correct modifications of these fits may be obtained from the New Departure Hyatt Bearings representative.

The fits actually obtained from the limits given will average materially closer than those listed under "Theoretical Fits" below. See page 57.

Bearing Bore Numbers	BEARING BORE Diameters		SHAFT REVOLVING				SHAFT STATIONARY			
			Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
0	.3937	.39355	.39375	.3936			.39365	.3935		
1	.4724	.47225	.47245	.4723	.0002	.0001	.47235	.4722	.0001	.0002
2	.5906	.59045	.59065	.5905			.59055	.5904		
3	.6693	.66915	.66935	.6692			.66925	.6691		
4	.7874	.78725	.78745	.7873	.0002	.0001	.78735	.7872	.0001	.0002
5	.9843	.98415	.98435	.9842			.98425	.9841		
6	1.1811	1.18095	1.18115	1.1810	.0002	.0001	1.18105	1.1809	.0001	.0002
7	1.3780	1.3778	1.3781	1.3779	.0003	.0001	1.3779	1.3777	.0001	.0003
8	1.5748	1.5746	1.5749	1.5747	.0003	.0001	1.5747	1.5745	.0001	.0003
9	1.7717	1.7715	1.7718	1.7716	.0003	.0001	1.7716	1.7714	.0001	.0003
10	1.9685	1.9683	1.9686	1.9684	.0003	.0001	1.9684	1.9682	.0001	.0003
11	2.1654	2.1652	2.1656	2.1653	.0004	.0001	2.1653	2.1650	.0001	.0004
12	2.3622	2.3620	2.3624	2.3621			2.3621	2.3618		
13	2.5591	2.5589	2.5593	2.5590	.0004	.0001	2.5590	2.5587	.0001	.0004
14	2.7559	2.7557	2.7561	2.7558			2.7558	2.7555		
15	2.9528	2.9526	2.9530	2.9527			2.9527	2.9524		
16	3.1496	3.1494	3.1498	3.1495	.0004	.0001	3.1495	3.1492	.0001	.0004
17	3.3465	3.34625	3.34665	3.3464			3.34635	3.3461		
18	3.5433	3.54305	3.54345	3.5432			3.54315	3.5429		
19	3.7402	3.73995	3.74035	3.7401	.0004	.0001	3.74005	3.7398	.0001	.0004
20	3.9370	3.93675	3.93715	3.9369			3.93685	3.9366		
21	4.1339	4.13365	4.13405	4.1338			4.13375	4.1335		
22	4.3307	4.33045	4.33085	4.3306	.0004	.0001	4.33055	4.3303	.0001	.0004
24	4.7244	4.72415	4.72455	4.7243			4.72425	4.7240		
26	5.1181	5.1178	5.1182	5.1179			5.1180	5.1177		
28	5.5118	5.5115	5.5119	5.5116	.0004	.0002	5.5117	5.5114	.0002	.0004
30	5.9055	5.9052	5.9056	5.9053			5.9054	5.9051		
32	6.2992	6.2989	6.2993	6.2990			6.2991	6.2988		
34	6.6929	6.6926	6.6930	6.6927	.0004	.0002	6.6928	6.6925	.0002	.0004
36	7.0866	7.0863	7.0867	7.0864			7.0865	7.0862		

### HOUSING MOUNTING FITS — For A.B.E.C. — 7 Tolerances

#### Metric Single Row Radial and Single Row Angular Contact Bearings

These housing fits are for precision spindles and other parts requiring exceptional accuracy and rigidity of support. Housing bores must be straight and brought to size by grinding or other methods capable of a quality of finish equal to the bearing bore and O.D.

Where soft housings, vibratory loads, or special preloads require modification of these fits, they may be obtained from the New Departure Hyatt Bearings representative.

In practice, fits from the limits listed will average closer than those given under "Theoretical Fits" below. Refer to page 57.

Bearing Bore Numbers			BEARING OUTER DIAM.		HOUSING STATIONARY				HOUSING REVOLVING			
Series			Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
E.L.	L.	M.	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
0			1.0236	1.0234	1.0238	1.0236			1.02355	1.02335		
1			1.1024	1.1022	1.1026	1.1024			1.10235	1.10215		
	0		1.1811	1.1809	1.1813	1.1811	.0000	.0004	1.18105	1.18085	.00025	.00015
2	1		1.2598	1.2596	1.2600	1.2598			1.25975	1.25955		
3	2	0	1.3780	1.3778	1.3782	1.3780	.0000	.0004	1.37795	1.37775	.00025	.00015
		1	1.4567	1.4565	1.4569	1.4567			1.45665	1.45645		
		3	1.5748	1.5746	1.5750	1.5748			1.57475	1.57455		
4	2	2	1.6535	1.6533	1.6537	1.6535	.0000	.0004	1.65345	1.65325	.00025	.00015
5	4	3	1.8504	1.8502	1.8506	1.8504			1.85035	1.85015		
		5	2.0472	2.0470	2.0474	2.0472			2.04715	2.04695		
6		4	2.1654	2.1652	2.1656	2.1654	.0000	.0004	2.16535	2.16515	.00025	.00015
7	6	5	2.4409	2.4407	2.4411	2.4409			2.44085	2.44065		
8			2.6772	2.6770	2.6774	2.6772			2.67715	2.67695		
	7	6	2.8346	2.8344	2.8348	2.8346	.0000	.0004	2.83455	2.83435	.00025	.00015
9			2.9528	2.9526	2.9530	2.9528			2.95275	2.95255		
10	8	7	3.1496	3.1494	3.1498	3.1496	.0000	.0004	3.14955	3.14935	.00025	.00015
		9	3.3465	3.3462	3.3467	3.3464	.0001	.0005	3.3465	3.3462	.0003	.0003
11	10	8	3.5433	3.5430	3.5435	3.5432			3.5433	3.5430		
12			3.7402	3.7399	3.7404	3.7401			3.7402	3.7399		
13	11	9	3.9370	3.9367	3.9372	3.9369	.0001	.0005	3.9370	3.9367	.0003	.0003
14	12	10	4.3307	4.3304	4.3309	4.3306			4.3307	4.3304		
15			4.5276	4.5273	4.5278	4.5275	.0001	.0005	4.5276	4.5273	.0003	.0003
	13	11	4.7244	4.7241	4.7246	4.7243	.0001	.0005	4.7244	4.7241	.0003	.0003
16	14		4.9213	4.9209	4.9216	4.9212	.0001	.0007	4.9213	4.9209	.0004	.0004
17	15	12	5.1181	5.1177	5.1184	5.1180			5.1181	5.1177		
18	16	13	5.5118	5.5114	5.5121	5.5117	.0001	.0007	5.5118	5.5114	.0004	.0004
19			5.7087	5.7083	5.7090	5.7086			5.7087	5.7083		
20	17	14	5.9055	5.9051	5.9058	5.9054			5.9055	5.9051		
21	18	15	6.2992	6.2988	6.2995	6.2991	.0001	.0007	6.2992	6.2988	.0004	.0004
22	19	16	6.6929	6.6925	6.6932	6.6928			6.6929	6.6925		
24	20	17	7.0866	7.0862	7.0869	7.0865			7.0866	7.0862		
		18	7.4803	7.4799	7.4806	7.4802	.0001	.0007	7.4803	7.4799	.0004	.0004
26	22	19	7.8740	7.8736	7.8743	7.8739			7.8740	7.8736		
28			8.2677	8.2673	8.2680	8.2676			8.2677	8.2673		
	24	20	8.4646	8.4642	8.4649	8.4645	.0001	.0007	8.4646	8.4642	.0004	.0004
30		21	8.8583	8.8579	8.8586	8.8582			8.8583	8.8579		
		26	9.0551	9.0547	9.0554	9.0550			9.0551	9.0547		
32		22	9.4488	9.4484	9.4491	9.4487	.0001	.0007	9.4488	9.4484	.0004	.0004
	28		9.8425	9.8421	9.8428	9.8424			9.8425	9.8421		
34		24	10.2362	10.2357	10.2365	10.2360			10.2363	10.2357		
	30		10.6299	10.6294	10.6302	10.6297	.0002	.0008	10.6300	10.6294	.0005	.0006
36		26	11.0236	11.0231	11.0239	11.0234			11.0237	11.0231		

## New Departure Hyatt BALL BEARING ENGINEERING DATA

### SHAFT MOUNTING FITS — For A.B.E.C. — 1 Tolerances

Single Row Type 30. ND Seal Bearings not to Standard Single Row Widths

The fits given in this table are satisfactory for nearly all general or average bearing applications. However, for some mounting conditions, certain modifications of these fits may be required.

In general, soft shafts; those not having smoothly ground bearing seats, and those subject to very heavy or vibratory loads, need tighter than average fits. Correct fits for any special conditions will be supplied by the New Departure Hyatt Bearings representative.

For explanation of "Expected Fits" listed below, see page 57.

Bearing Numbers	BEARING BORE		SHAFT REVOLVING						SHAFT STATIONARY					
	Diameters		Diameters		Expected Fit		Theoret. Fit		Diameters		Expected Fit		Theoret. Fit	
	Max.	Min.	Max.	Min.	Loose or Tight	Tight	Loose	Tight	Max.	Min.	Max. Loose	Min. Loose	Loose	Tight
<b>34</b>	.1575	.1572	.1576	.1573					.1574	.1571				
<b>35</b>	.1969	.1966	.1970	.1967	.0001L	.0003	.0002	.0004	.1968	.1965	.0003	.0001T	.0004	.0002
<b>36</b>	.2362	.2359	.2363	.2360					.2361	.2358				
<b>37</b>	.2756	.2753	.2757	.2754					.2755	.2752				
<b>38</b>	.3150	.3147	.3151	.3148	.0001L	.0003	.0002	.0004	.3149	.3146	.0003	.0001T	.0004	.0002
<b>39</b>	.3543	.3540	.3544	.3541					.3542	.3539				
<b>8006</b>	.2362	.2359	.2363	.2360					.2361	.2358				
<b>8007, 8037</b>	.2756	.2753	.2757	.2754	.0001L	.0003	.0002	.0004	.2755	.2752	.0003	.0001T	.0004	.0002
<b>8008, 8038</b>	.3150	.3147	.3151	.3148					.3149	.3146				
<b>8009, 8039</b>	.3543	.3540	.3544	.3541	.0001L	.0003	.0002	.0004	.3542	.3539	.0003	.0001T	.0004	.0002
<b>8011</b>	.4331	.4328	.4333	.4330	.0000L	.0004	.0001	.0005	.4329	.4326	.0004	.0000	.0005	.0001
<b>8013</b>	.5118	.5115	.5120	.5117	.0000L	.0004	.0001	.0005	.5116	.5113	.0004	.0000	.0005	.0001
<b>8014</b>	.5512	.5509	.5514	.5511	.0000L	.0004	.0001	.0005	.5510	.5507	.0004	.0000	.0005	.0001
<b>8016</b>	.6299	.6296	.6301	.6298	.0000L	.0004	.0001	.0005	.6297	.6294	.0004	.0000	.0005	.0001
<b>8026</b>	1.0236	1.0232	1.0239	1.0235	.0000L	.0006	.0001	.0007	1.0233	1.0229	.0006	.0000	.0007	.0001

### HOUSING MOUNTING FITS — For A.B.E.C. — 1 Tolerances

Single Row Type 30. ND Seal Bearings not to Standard Single Row Widths

The fits given in this table are satisfactory for nearly all general or average bearing applications. However, for some mounting conditions, certain modification of these fits may be required.

In general, soft metal housings, particularly when revolving, and those subject to heavy or vibratory loads, need tighter than average fits. For best results, housings should have a smooth finish such as produced by grinding or reaming.

Correct fits for any special conditions will be supplied by the New Departure Hyatt Bearings representative.

In practice the actual fits obtained will be closer than those listed under "Theoretical Fits" below. See page 57.

Bearing Numbers	BEARING OUTER DIAM.		HOUSING STATIONARY				HOUSING REVOLVING			
	Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
<b>34</b>	.6299	.6295	.6303	.6298			.6299	.6294		
<b>35, 36</b>	.7480	.7476	.7484	.7479	.0001	.0008	.7480	.7475	.0005	.0004
<b>37, 38</b>	.8661	.8657	.8665	.8660			.8661	.8656		
<b>39, 8039</b>	1.0236	1.0232	1.0240	1.0235			1.0236	1.0231		
<b>8037, 8038</b>	.8661	.8657	.8665	.8660			.8661	.8656		
<b>8006, 7 &amp; 8</b>	.9449	.9445	.9453	.9448	.0001	.0008	.9449	.9444	.0005	.0004
<b>8009</b>	1.1811	1.1807	1.1815	1.1810			1.1811	1.1806		
<b>8011, 8013</b>	1.2598	1.2593	1.2603	1.2597			1.2598	1.2592		
<b>8014, 8016</b>	1.3780	1.3775	1.3785	1.3779	.0001	.0010	1.3780	1.3774	.0006	.0005
<b>8026</b>	2.0472	2.0467	2.0477	2.0471			2.0472	2.0466		

**SHAFT MOUNTING FITS — For A.B.E.C. — 3 Tolerances**  
Single Row Type 30. ND Seal Bearings not to Standard Single Row Widths

The fits given in this table are intended for applications requiring greater accuracy in certain respects than for general use. Modification for some mounting conditions may be required, such as for very heavy or vibratory loads where somewhat tighter fits are desired.

Correct fits for any special conditions will be supplied by the New Departure Hyatt Bearings representative.

Actually, with these limits, closer fits will be obtained than listed under "Theoretical Fits." See page 57.

Bearing Numbers	BEARING BORE		SHAFT REVOLVING				SHAFT STATIONARY			
	Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
<b>34</b>	.1575	.1573	.1576	.1573			.1575	.1572		
<b>35</b>	.1969	.1967	.1970	.1967	.0003	.0002	.1969	.1966	.0002	.0003
<b>36</b>	.2362	.2360	.2363	.2360			.2362	.2359		
<b>37</b>	.2756	.2754	.2757	.2754			.2756	.2753		
<b>38</b>	.3150	.3148	.3151	.3148	.0003	.0002	.3150	.3147	.0002	.0003
<b>39</b>	.3543	.3541	.3544	.3541			.3543	.3540		
<b>8006</b>	.2362	.2360	.2363	.2360			.2362	.2359		
<b>8007, 8037</b>	.2756	.2754	.2757	.2754	.0003	.0002	.2756	.2753	.0002	.0003
<b>8008, 8038</b>	.3150	.3148	.3151	.3148			.3150	.3147		
<b>8009, 8039</b>	.3543	.3541	.3544	.3541	.0003	.0002	.3543	.3540	.0002	.0003
<b>8011</b>	.4331	.4329	.4333	.4330	.0004	.0001	.4330	.4327	.0001	.0004
<b>8013</b>	.5118	.5116	.5120	.5117	.0004	.0001	.5117	.5114	.0001	.0004
<b>8014</b>	.5512	.5510	.5514	.5511			.5511	.5508		
<b>8016</b>	.6299	.6297	.6301	.6298	.0004	.0001	.6298	.6295	.0001	.0004
<b>8026</b>	1.0236	1.0234	1.0238	1.0235			1.0235	1.0232		

**HOUSING MOUNTING FITS — For A.B.E.C. — 3 Tolerances**  
Single Row Type 30. ND Seal Bearings not to Standard Single Row Widths

The fits given in this table are intended for applications requiring greater accuracy in certain respects than for general use.

Modification for some conditions may be required, such as for soft metal housings, particularly when revolving, or those subject to heavy or vibratory loads, where somewhat tighter fits are necessary. Housings should be smoothly finished as by grinding or reaming.

Fits for any special conditions will be supplied by the New Departure Hyatt Bearings representative.

Actual fits with these limits will be closer than listed under "Theoretical Fits" below. See page 57.

Bearing Numbers	BEARING OUTER DIAM.		HOUSING STATIONARY				HOUSING REVOLVING			
	Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
<b>34</b>	.6299	.6296	.6302	.6298			.6299	.6295		
<b>35, 36</b>	.7480	.7477	.7483	.7479			.7480	.7476		
<b>37, 38</b>	.8661	.8658	.8664	.8660	.0001	.0006	.8661	.8657	.0004	.0003
<b>39, 8039</b>	1.0236	1.0233	1.0239	1.0235			1.0236	1.0232		
<b>8037, 8038</b>	.8661	.8658	.8664	.8660						
<b>8006, 7 &amp; 8</b>	.9449	.9446	.9452	.9448	.0001	.0006				
<b>8009</b>	1.1811	1.1808	1.1814	1.1810						
<b>8011, 8013</b>	1.2598	1.2595	1.2602	1.2597	.0001	.0007				
<b>8014, 8016</b>	1.3780	1.3777	1.3784	1.3779	.0001	.0007				
<b>8026</b>	2.0472	2.0468	2.0476	2.0471	.0001	.0008				

## New Departure Hyatt BALL BEARING ENGINEERING DATA

### SHAFT AND HOUSING MOUNTING FITS — For A.B.E.C. — 5 Tolerances

Single Row Type 30

The fits given in these tables are for parts requiring considerable accuracy and rigidity in mounting. Shaft seats and housing bores should be smoothly ground or brought to size by methods giving a quality of finish equal to the bearing bore and O.D.

Some conditions, such as soft shafts or soft alloy housings, heavy or vibratory loads or special preloads, may require modification of these fits. Proper fits for any special conditions will be furnished by the New Departure Hyatt Bearings representative.

Actual fits obtained from the limits listed will be closer than given under "Theoretical Fits" below. See page 57.

#### Shaft

Bearing Numbers	BEARING BORE		SHAFT REVOLVING				SHAFT STATIONARY			
	Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
<b>34</b>	.1575	.1573	.1575	.1573	.0002	.0002	.1575	.1573	.0002	.0002
<b>35</b>	.1969	.1967	.1969	.1967			.1969	.1967		
<b>36</b>	.2362	.2360	.2362	.2360			.2362	.2360		
<b>37</b>	.2756	.2754	.2756	.2754	.0002	.0002	.2756	.2754	.0002	.0002
<b>38</b>	.3150	.3148	.3150	.3148			.3150	.3148		
<b>39</b>	.3543	.3541	.3543	.3541			.3543	.3541		

#### Housing

Bearing Numbers	BEARING OUTER DIAM.		HOUSING STATIONARY				HOUSING REVOLVING			
	Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
<b>34</b>	.6299	.6297	.6302	.6299	.0000	.0005	.6299	.6296	.0003	.0002
<b>35, 36</b>	.7480	.7478	.7483	.7480			.7480	.7477		
<b>37, 38</b>	.8661	.8659	.8664	.8661			.8661	.8658		
<b>39</b>	1.0236	1.0234	1.0239	1.0236			1.0236	1.0233		

**SHAFT AND HOUSING MOUNTING FITS — For A.B.E.C. — 1 Tolerances**  
Inch Series Bearings

These fits are intended for all general or average bearing applications. In some instances, conditions such as soft shafts, soft alloy housings, heavy or vibratory loads, etc., may require modification of the fits. Correct fits for such circumstances may be obtained from the New Departure Hyatt Bearings representative.

Actual fits obtained with the limits given will be closer than listed under "Theoretical Fits" below. See page 57 for explanation of "Expected," and "Theoretical" fits.

**Shaft**

Bearing Numbers	BEARING BORE		SHAFT REVOLVING						SHAFT STATIONARY					
	Diameters		Diameters		Expected Fit		Theoret. Fit		Diameters		Expected Fit		Theoret. Fit	
	Max.	Min.	Max.	Min.	Loose or Tight	Tight	Loose	Tight	Max.	Min.	Max. Loose	Min. Loose	Loose	Tight
R-2	.1250	.1247	.1251	.1248					.1249	.1246				
R-2-A	.1250	.1247	.1251	.1248	.0001L	.0003	.0002	.0004	.1249	.1246	.0003	.0001T	.0004	.0002
R-3	.1875	.1872	.1876	.1873					.1874	.1871				
R-4	.2500	.2497	.2501	.2498					.2499	.2496				
R-4-A	.2500	.2497	.2501	.2498	.0001L	.0003	.0002	.0004	.2499	.2496	.0003	.0001T	.0004	.0002
R-6	.3750	.3747	.3751	.3748					.3749	.3746				
R-8	.5000	.4997	.5002	.4999	.0000L	.0004	.0001	.0005	.4998	.4995	.0004	.0000	.0005	.0001
R-10	.6250	.6247	.6252	.6249	.0000L	.0004	.0001	.0005	.6248	.6245	.0004	.0000	.0005	.0001
R-12	.7500	.7496	.7503	.7499	.0000L	.0006	.0001	.0007	.7497	.7493	.0006	.0000	.0007	.0001
R-14	.8750	.8746	.8753	.8749					.8747	.8743				
R-16	1.0000	.9996	1.0003	.9999	.0000L	.0006	.0001	.0007	.9997	.9993	.0006	.0000	.0007	.0001
R-18	1.1250	1.1246	1.1253	1.1249					1.1247	1.1243				
R-20	1.2500	1.2495	1.2504	1.2499					1.2496	1.2491				
R-22	1.3750	1.3745	1.3754	1.3749	.0001T	.0007	.0001	.0009	1.3746	1.3741	.0007	.0001	.0009	.0001
R-24	1.5000	1.4995	1.5004	1.4999					1.4996	1.4991				

**Housing**

Bearing Numbers	BEARING OUTER DIAM.		HOUSING STATIONARY				HOUSING REVOLVING			
	Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
R-2	.3750	.3746	.3754	.3749			.3750	.3745		
R-2-A	.5000	.4996	.5004	.4999	.0001	.0008	.5000	.4995	.0005	.0004
R-3	.5000	.4996	.5004	.4999			.5000	.4995		
R-4	.6250	.6246	.6254	.6249			.6250	.6245		
R-4-A	.7500	.7496	.7504	.7499	.0001	.0008	.7500	.7495	.0005	.0004
R-6	.8750	.8746	.8754	.8749			.8750	.8745		
R-8	1.1250	1.1246	1.1254	1.1249	.0001	.0008	1.1250	1.1245	.0005	.0004
R-10	1.3750	1.3745	1.3755	1.3749	.0001	.0010	1.3750	1.3744	.0006	.0005
R-12	1.6250	1.6245	1.6255	1.6249	.0001	.0010	1.6250	1.6244	.0006	.0005
R-14	1.8750	1.8745	1.8755	1.8749			1.8750	1.8744		
R-16	2.0000	1.9995	2.0005	1.9999	.0001	.0010	2.0000	1.9994	.0006	.0005
R-18	2.1250	2.1245	2.1255	2.1249			2.1250	2.1244		
R-20	2.2500	2.2495	2.2505	2.2499			2.2500	2.2494		
R-22	2.5000	2.4995	2.5005	2.4999	.0001	.0010	2.5000	2.4994	.0006	.0005
R-24	2.6250	2.6245	2.6255	2.6249			2.6250	2.6244		

## New Departure Hyatt BALL BEARING ENGINEERING DATA

### SHAFT AND HOUSING MOUNTING FITS — For A.B.E.C. — 3 Tolerances

#### Inch Series Bearings

These fits are intended for applications requiring greater accuracy in certain respects than for general use. In some instances, conditions such as the use of soft alloy housings, heavy or vibratory loads, etc., may require modification of the fits. Correct fits for such circumstances may be obtained from the New Departure Hyatt Bearings representative.

Actual fits obtained with the limits given will be closer than listed under "Theoretical Fits" below. See page 57 for explanation of "Expected," and "Theoretical" fits.

#### Shaft

Bearing Numbers	BEARING BORE		SHAFT REVOLVING				SHAFT STATIONARY			
	Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
R-2	.1250	.1248	.1251	.1248			.1250	.1247		
R-2-A	.1250	.1248	.1251	.1248	.0003	.0002	.1250	.1247	.0002	.0003
R-3	.1875	.1873	.1876	.1873			.1875	.1872		
R-4	.2500	.2498	.2501	.2498			.2500	.2497		
R-4-A	.2500	.2498	.2501	.2498	.0003	.0002	.2500	.2497	.0002	.0003
R-6	.3750	.3748	.3751	.3748			.3750	.3747		
R-8	.5000	.4998	.5002	.4999			.4999	.4996		
R-10	.6250	.6248	.6252	.6249	.0004	.0001	.6249	.6246	.0001	.0004
R-12	.7500	.7498	.7502	.7499			.7499	.7496		
R-14	.8750	.8748	.8752	.8749			.8749	.8746		
R-16	1.0000	.9998	1.0002	.9999	.0004	.0001	.9999	.9996	.0001	.0004
R-18	1.1250	1.1248	1.1252	1.1249			1.1249	1.1246		
R-20	1.2500	1.2497	1.2503	1.2499			1.2498	1.2494		
R-22	1.3750	1.3747	1.3753	1.3749	.0006	.0001	1.3748	1.3744	.0001	.0006
R-24	1.5000	1.4997	1.5003	1.4999			1.4998	1.4994		

#### Housing

Bearing Numbers	BEARING OUTER DIAM.		HOUSING STATIONARY				HOUSING REVOLVING			
	Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
R-2	.3750	.3747	.3753	.3749			.3750	.3746		
R-2-A	.5000	.4997	.5003	.4999	.0001	.0006	.5000	.4996	.0004	.0003
R-3	.5000	.4997	.5003	.4999			.5000	.4996		
R-4	.6250	.6247	.6253	.6249			.6250	.6246		
R-4-A	.7500	.7497	.7503	.7499	.0001	.0006	.7500	.7496	.0004	.0003
R-6	.8750	.8747	.8753	.8749			.8750	.8746		
R-8	1.1250	1.1247	1.1253	1.1249			1.1250	1.1246		
R-10	1.3750	1.3747	1.3753	1.3749	.0001	.0006	1.3750	1.3746	.0004	.0003
R-12	1.6250	1.6247	1.6253	1.6249			1.6250	1.6246		
R-14	1.8750	1.8747	1.8753	1.8749	.0001	.0006	1.8750	1.8746	.0004	.0003
R-16	2.0000	1.9996	2.0004	1.9999	.0001	.0008	2.0000	1.9995	.0005	.0004
R-18	2.1250	2.1246	2.1254	2.1249	.0001	.0008	2.1250	2.1245	.0005	.0004
R-20	2.2500	2.2496	2.2504	2.2499			2.2500	2.2495		
R-22	2.5000	2.4996	2.5004	2.4999	.0001	.0008	2.5000	2.4995	.0005	.0004
R-24	2.6250	2.6246	2.6254	2.6249			2.6250	2.6245		



**SHAFT AND HOUSING MOUNTING FITS — For A.B.E.C. — 5 Tolerances**  
Inch Series Bearings

The fits given in these tables are for parts requiring considerable accuracy and rigidity in mounting. Shaft seats and housing bores should be smoothly ground or brought to size by methods giving a quality of finish equal to the bearing bore and O.D.

Some conditions, such as soft shafts or soft alloy housings, heavy or vibratory loads or special preloads, may require modification of these fits. Proper fits for any special conditions will be furnished by the New Departure Hyatt Bearings representative.

Actual fits obtained from the limits listed will be closer than given under "Theoretical Fits" below. See page 57.

**Shaft**

Bearing Numbers	BEARING BORE		SHAFT REVOLVING				SHAFT STATIONARY			
	Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
R-2	.1250	.1248	.1250	.1248			.1250	.1248		
R-2-A	.1250	.1248	.1250	.1248	.0002	.0002	.1250	.1248	.0002	.0002
R-3	.1875	.1873	.1875	.1873			.1875	.1873		
R-4	.2500	.2498	.2500	.2498			.2500	.2498		
R-4-A	.2500	.2498	.2500	.2498	.0002	.0002	.2500	.2498	.0002	.0002
R-6	.3750	.3748	.3750	.3748			.3750	.3748		
R-8	.5000	.4998	.5001	.4999			.4999	.4997		
R-10	.6250	.6248	.6251	.6249	.0003	.0001	.6249	.6247	.0001	.0003
R-12	.7500	.7498	.7501	.7499			.7499	.7497		
R-14	.8750	.8748	.8751	.8749			.8749	.8747		
R-16	1.0000	.9998	1.0001	.9999	.0003	.0001	.9999	.9997	.0001	.0003
R-18	1.1250	1.1248	1.1251	1.1249			1.1249	1.1247		
R-20	1.2500	1.2498	1.2502	1.2499			1.2499	1.2496		
R-22	1.3750	1.3748	1.3752	1.3749	.0004	.0001	1.3749	1.3746	.0001	.0004
R-24	1.5000	1.4998	1.5002	1.4999			1.4999	1.4996		

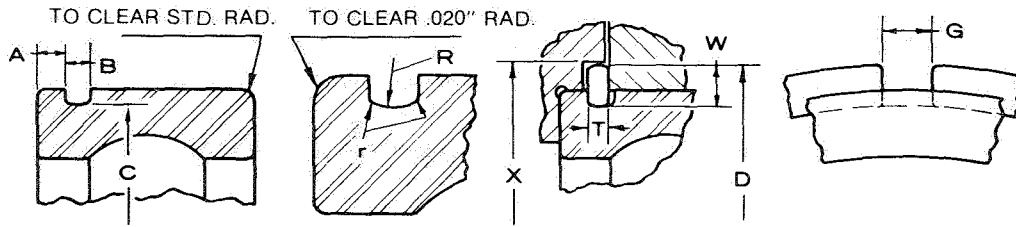
**Housing**

Bearing Numbers	BEARING OUTER DIAM.		HOUSING STATIONARY				HOUSING REVOLVING			
	Diameters		Diameters		Theoret. Fit		Diameters		Theoret. Fit	
	Max.	Min.	Max.	Min.	Tight	Loose	Max.	Min.	Tight	Loose
R-2	.3750	.3748	.3753	.3750			.3750	.3747		
R-2-A	.5000	.4998	.5003	.5000	.0000	.0005	.5000	.4997	.0003	.0002
R-3	.5000	.4998	.5003	.5000			.5000	.4997		
R-4	.6250	.6248	.6253	.6250			.6250	.6247		
R-4-A	.7500	.7498	.7503	.7500	.0000	.0005	.7500	.7497	.0003	.0002
R-6	.8750	.8748	.8753	.8750			.8750	.8747		
R-8	1.1250	1.1248	1.1253	1.1250			1.1250	1.1247		
R-10	1.3750	1.3748	1.3753	1.3750	.0000	.0005	1.3750	1.3747	.0003	.0002
R-12	1.6250	1.6248	1.6253	1.6250			1.6250	1.6247		
R-14	1.8750	1.8748	1.8753	1.8750	.0000	.0005	1.8750	1.8747	.0003	.0002
R-16	2.0000	1.9997	2.0003	2.0000	.0000	.0006	2.0000	1.9997	.0003	.0003
R-18	2.1250	2.1247	2.1253	2.1250	.0000	.0006	2.1250	2.1247	.0003	.0003
R-20	2.2500	2.2497	2.2503	2.2500			2.2500	2.2497		
R-22	2.5000	2.4997	2.5003	2.5000	.0000	.0006	2.5000	2.4997	.0003	.0003
R-24	2.6250	2.6247	2.6253	2.6250			2.6250	2.6247		

# New Departure Hyatt BALL BEARING ENGINEERING DATA

## SNAP RINGS

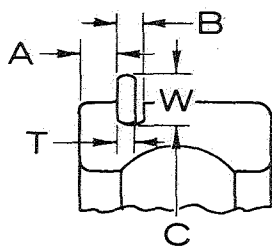
Snap rings are available for the bearings so indicated in the preceding sections (ABEC spec. 1 & 3) and the detailed dimensions are shown below.



Bearing Number				A	A	B	C	R	r	D	T	W	G	X
Extra Light	Lt.	Med.	Hvy.	L00 Series	2, 3, 400 Series					Dia. Ref.	Thick	Width	Gap	C' Bore Min.
L00				.050		.040	1.050	.030	.016		.031	.078		1.234
L01	200			.078	.078	.056	1.109	.040	.016	1 <sup>23</sup> / <sub>64</sub>	.042	.125	1/8	1.391
L02	201			.078	.078	.056	1.187	.040	.016	1 <sup>7</sup> / <sub>16</sub>	.042	.125	1/8	1.469
L03	202	300		.078	.078	.056	1.306	.040	.016	1 <sup>35</sup> / <sub>64</sub>	.042	.125	1/8	1.578
		301			.078	.056	1.369	.040	.016	1 <sup>39</sup> / <sub>64</sub>	.042	.125	1/8	1.641
	203			.078	.078	.056	1.500	.040	.016	1 <sup>3</sup> / <sub>4</sub>	.042	.125	1/8	1.781
L04		302		.078	.078	.056	1.565	.040	.016	1 <sup>13</sup> / <sub>16</sub>	.042	.125	1/8	1.844
L05	204	303		.078	.094	.056	1.756	.040	.016	2 <sup>1</sup> / <sub>16</sub>	.042	.156	1/8	2.094
	205	304			.094	.056	1.958	.040	.016	2 <sup>17</sup> / <sub>64</sub>	.042	.156	3/16	2.297
L06				.078		.056	2.071	.040	.016	2 <sup>3</sup> / <sub>8</sub>	.042	.156	3/16	2.406
L07	206	305	403	.078	.125	.078	2.347	.060	.024	2 <sup>31</sup> / <sub>32</sub>	.065	.156	3/16	2.688
L08				.094		.078	2.552	.060	.024	2 <sup>59</sup> / <sub>64</sub>	.065	.188	3/16	2.984
L09	207	306	404	.094	.125	.078	2.709	.060	.024	3 <sup>5</sup> / <sub>64</sub>	.065	.188	3/16	3.141
						.078	2.828	.060	.024	3 <sup>13</sup> / <sub>64</sub>	.065	.188	3/16	3.266
L10	208	307	405	.094	.125	.078	3.024	.060	.024	3 <sup>13</sup> / <sub>32</sub>	.065	.188	3/16	3.469
	209				.125	.078	3.221	.060	.024	3 <sup>19</sup> / <sub>32</sub>	.065	.188	3/16	3.656
L11	210	308	406	.109	.125	.109	3.417	.080	.024	3 <sup>51</sup> / <sub>64</sub>	.095	.188	3/16	3.859
L12				.109		.109	3.615	.080	.024	3 <sup>63</sup> / <sub>64</sub>	.095	.188	3/16	4.047
L13	211	309	407	.109	.125	.109	3.811	.080	.024	4 <sup>3</sup> / <sub>16</sub>	.095	.188	3/16	4.250
L14	212	310	408	.109	.125	.109	4.205	.080	.024	4 <sup>37</sup> / <sub>64</sub>	.095	.188	3/16	4.641
L15				.109		.109	4.402	.080	.024	4 <sup>25</sup> / <sub>32</sub>	.095	.188	3/16	4.844
L16	213	311	409	.109	.156	.125	4.536	.090	.024	5 <sup>3</sup> / <sub>32</sub>	.109	.281	9/32	5.156
	214				.156	.125	4.733	.090	.024	5 <sup>19</sup> / <sub>64</sub>	.109	.281	9/32	5.359
L17	215	312	410	.109	.156	.125	4.930	.090	.024	5 <sup>1</sup> / <sub>2</sub>	.109	.281	9/32	5.562
L18	216	313	411	.141	.188	.125	5.324	.090	.024	5 <sup>57</sup> / <sub>64</sub>	.109	.281	9/32	5.953
L19				.141		.125	5.521	.090	.024	6 <sup>5</sup> / <sub>64</sub>	.109	.281	9/32	6.141
L20	217	314	412	.141	.188	.125	5.718	.090	.024	6 <sup>9</sup> / <sub>32</sub>	.109	.281	9/32	6.344
L21	218	315	413	.141	.188	.125	6.111	.090	.024	6 <sup>43</sup> / <sub>64</sub>	.109	.281	9/32	6.734
L22	219	316		.141	.219	.141	6.443	.100	.024	7 <sup>3</sup> / <sub>16</sub>	.120	.375	3/8	7.250
L24	220	317	414	.141	.219	.141	6.837	.100	.024	7 <sup>19</sup> / <sub>32</sub>	.120	.375	3/8	7.656
	221	318	415	.141	.219	.141	7.230	.100	.024	7 <sup>63</sup> / <sub>64</sub>	.120	.375	3/8	8.047
L26	222	319	416	.219	.219	.141	7.624	.100	.024	8 <sup>3</sup> / <sub>8</sub>	.120	.375	3/8	8.438
L28			417	.219	.219	.141	8.018	.100	.024	8 <sup>49</sup> / <sub>64</sub>	.120	.375	3/8	8.828
	224	320		.219	.219	.141	8.215	.100	.024	8 <sup>31</sup> / <sub>32</sub>	.120	.375	3/8	9.031
L30		321	418	.219	.219	.141	8.608	.100	.024	9 <sup>23</sup> / <sub>64</sub>	.120	.375	3/8	9.422

### Snap Ring and Groove Tolerances

AFBMA and ND Standards



B = ± .003  
T = ± .002  
W = ± .003

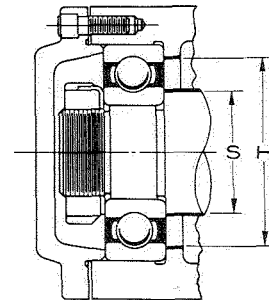
Extra Light	Bore Numbers			A	C
	Light	Medium	Heavy		
1-5	0-5	0-4		± .003	+ .000 - .010
6				± .004	+ .000 - .010
7-17	6-15	5-12	3-10	± .004	+ .000 - .020
18-32	16-26	13-22	11-18	± .005	± .000 - .020

\*On snap ring side of all snap ring bearings; r to clear .020" radius.

**SHAFT AND HOUSING SHOULDERS**

Single Row Radial, Extra-Light, Light & Medium Series — Single Row Angular Contact Extra-Light Series

"Recommended" shaft and housing shoulder diameters should be used whenever possible to assure adequate support of bearing under all load conditions. These shoulders will resist the maximum thrust which may be safely applied to bearing without developing stresses detrimental to any of the metals used for shafts or housings, including aluminum. Little is gained by shaft or housing shoulders greater than recommended. Larger shoulders may interfere with closures of sealed or shielded bearings. In general, "recommended" diameters expose enough inner ring face to allow removal without damage to sealed or shielded bearings.



"Minimum" shaft and "maximum" housing shoulder diameters are those considered necessary to align bearings properly and to provide ample resistance to light thrust loads.

Bearing Bore No.	EXTRA-LIGHT SERIES				LIGHT SERIES				MEDIUM SERIES			
	3L00, 0L00 and H0L00 Shoulder Diameter				1200 and *3200 Shoulder Diameter				1300 and *3300 Shoulder Diameter			
	S		H		S		H		S		H	
	Rec.	Min.	Rec.	Max.	Rec.	Min.	Rec.	Max.	Rec.	Min.	Rec.	Max.
0	.500		.920		.494		1.05		.494		1.23	
1	.570		1.000		.572		1.12		.632		1.26	
2	.690		1.15		.691		1.23		.750		1.44	
3	.780		1.27		.769		1.37		.829		1.62	
4	.940		1.50		1.000	.947	1.64		1.000	.947	1.78	1.85
5	1.14		1.69		1.20	1.14	1.84		1.24	1.14	2.16	2.24
6	1.37		1.94		1.40	1.34	2.18	2.24	1.44	1.34	2.55	2.64
7	1.58		2.21		1.63	1.54	2.56	2.64	1.70	1.62	2.77	2.85
8	1.78	1.74	2.44	2.48	1.82	1.73	2.85	2.95	1.92	1.82	3.15	3.24
9	2.00	1.93	2.70	2.75	2.05	1.93	3.05	3.15	2.14	2.01	3.50	3.64
10	2.19	2.13	2.90	2.95	2.21	2.13	3.24	3.34	2.44	2.29	3.80	3.93
11	2.43	2.32	3.27	3.34	2.48	2.40	3.55	3.64	2.75	2.48	4.18	4.32
12	2.63	2.52	3.46	3.54	2.74	2.60	3.91	4.03	2.97	2.68	4.55	4.72
13	2.83	2.72	3.65	3.74	2.90	2.80	4.28	4.42	3.20	2.88	4.92	5.11
14	3.06	2.92	4.02	4.13	3.11	3.00	4.49	4.62	3.42	3.08	5.29	5.51
15	3.24	3.11	4.22	4.33	3.39	3.19	4.68	4.82	3.65	3.27	5.66	5.90
16	3.47	3.31	4.58	4.72	3.67	3.47	4.99	5.11	3.88	3.47	6.02	6.29
17	3.67	3.51	4.78	4.92	3.90	3.67	5.34	5.50	4.16	3.75	6.33	6.59
18	3.92	3.78	5.08	5.21	4.11	3.86	5.73	5.90	4.38	3.94	6.70	6.98
19	4.11	3.98	5.28	5.41	4.34	4.06	6.10	6.29	4.62	4.14	7.06	7.37
20	4.31	4.18	5.48	5.61	4.57	4.26	6.46	6.69	4.84	4.34	7.64	7.96
21	4.57	4.45	5.78	5.90	4.80	4.45	6.83	7.08	5.07	4.53	8.01	8.36
22	4.83	4.65	6.16	6.29	5.03	4.65	7.19	7.47	5.29	4.73	8.59	8.95
24	5.22	5.04	6.56	6.69	5.44	5.04	7.76	8.06				
26	5.66	5.44	7.30	7.47	5.90	5.52	8.27	8.56				
28	6.05	5.83	7.69	7.87	6.36	5.91	9.00	9.34				
30	6.47	6.23	8.26	8.46								
36	7.75	7.41	10.30	10.62								

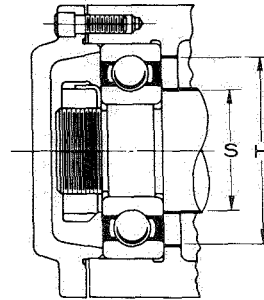
\*Type 8000 and 9000 ND Seal bearings based on type 3000 use same shoulders as Series 3200 and 3300 above.

## New Departure Hyatt BALL BEARING ENGINEERING DATA

### SHAFT AND HOUSING SHOULDERS — Continued Single Row Angular Contact — Light and Medium Series

“Recommended” shaft and housing shoulder diameters should be used whenever possible to assure adequate support of bearing under all load conditions. These shoulders will resist the maximum thrust which may be safely applied to bearing without developing stresses detrimental to any of the metals used for shafts or housings, including aluminum. Little is gained by shaft or housing shoulders greater than recommended. Larger shoulders may interfere with closures of sealed or shielded bearings. In general, “recommended” diameters expose enough inner ring face to allow removal without damage to sealed or shielded bearings.

“Minimum” shaft and “maximum” housing shoulder diameters are those considered necessary to align bearings properly and to provide ample resistance to light thrust loads.

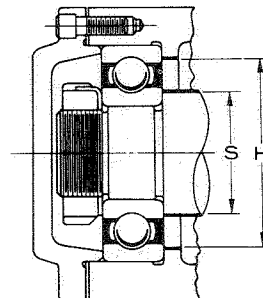


Bearing Bore Number	LIGHT SERIES 20,200, H20,200 and 30,200				MEDIUM SERIES 20,300, H20,300 and 30,300			
	Shoulder Diameter				Shoulder Diameter			
	S		H		S		H	
	Rec.	Min.	Rec.	Max.	Rec.	Min.	Rec.	Max.
0	.545	.494	1.05		.584	.494	1.23	
1	.636	.572	1.12		.698	.632	1.26	
2	.748	.691	1.23		.835	.751	1.44	
3	.880	.829	1.37		.927	.829	1.62	
4	1.02	.947	1.64		1.09	.947	1.78	1.85
5	1.20	1.14	1.84		1.30	1.14	2.16	2.24
6	1.45	1.34	2.18	2.24	1.51	1.34	2.55	2.64
7	1.67	1.54	2.56	2.64	1.78	1.62	2.77	2.85
8	1.89	1.74	2.85	2.95	2.00	1.82	3.15	3.24
9	2.08	1.93	3.05	3.15	2.25	2.01	3.50	3.64
10	2.27	2.13	3.24	3.34	2.53	2.29	3.80	3.93
11	2.56	2.40	3.55	3.64	2.75	2.48	4.18	4.32
12	2.78	2.60	3.91	4.03	2.97	2.68	4.55	4.72
13	3.01	2.80	4.28	4.42	3.20	2.88	4.92	5.11
14	3.19	3.00	4.49	4.62	3.42	3.08	5.29	5.51
15	3.39	3.19	4.68	4.82	3.65	3.27	5.66	5.90
16	3.67	3.47	4.99	5.11	3.88	3.47	6.02	6.29
17	3.90	3.67	5.34	5.50	4.16	3.75	6.33	6.59
18	4.11	3.86	5.73	5.90	4.38	3.94	6.70	6.98
19	4.34	4.06	6.10	6.29	4.62	4.14	7.06	7.37
20	4.57	4.26	6.46	6.69	4.84	4.34	7.64	7.96
21	4.80	4.45	6.83	7.08	5.07	4.53	8.01	8.36
22	5.03	4.65	7.19	7.47	5.29	4.73	8.59	8.95
24	5.44	5.04	7.76	8.06	5.80	5.12	9.28	9.74
26	5.90	5.52	8.27	8.56	6.30	5.60	9.96	10.42
28	6.36	5.91	9.00	9.34	6.75	5.99	10.70	11.21
30	6.81	6.31	9.75	10.13	7.21	6.39	11.43	12.00

**SHAFT AND HOUSING SHOULDERS — Continued**  
 Extra Small Single Row and ND Seal

"Recommended" shaft and housing shoulder diameters should be used whenever possible to assure adequate support of bearing under all load conditions. These shoulders will resist the maximum thrust which may be safely applied to bearing without developing stresses detrimental to any of the metals used for shafts or housings, including aluminum. Little is gained by shaft or housing shoulders greater than recommended. Larger shoulders may interfere with closures of sealed or shielded bearings. In general, "recommended" diameters expose enough inner ring face to allow removal without damage to sealed or shielded bearings.

"Minimum" shaft and "maximum" housing shoulder diameters are those considered necessary to align bearings properly and to provide ample resistance to light thrust loads.



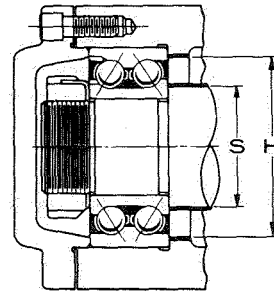
INCH SERIES TYPE R					ND SEAL				
Bearing No.	Shoulder Diameter				Bearing No.	Shoulder Diameter			
	S		H			S		H	
	Rec.	Min.	Rec.	Max.		Rec.	Min.	Rec.	Max.
<b>R2</b>	.173		.315		<b>8006</b>	.300		.865	
<b>R2A</b>	.173		.440		<b>8007</b>	.341		.865	
<b>R3</b>	.236		.440		<b>8008</b>	.379		.865	
<b>R4</b>	.298		.565		<b>8009</b>	.494		1.05	
<b>R4A</b>	.314		.670		<b>8011</b>	.572		1.12	
<b>R6</b>	.439		.795		<b>8013</b>	.612		1.12	
<b>R8</b>	.612	.564	1.04		<b>8014</b>	.691		1.23	
<b>R10</b>	.780	.749	1.22		<b>8016</b>	.730		1.23	
<b>R12</b>	.927	.874	1.47		<b>8026</b>	1.20		1.84	
<b>R14</b>	1.05	1.000	1.72		EXTRA-SMALL TYPE *30				
<b>R16</b>	1.17	1.12	1.84		<b>34</b>	.222		.550	
<b>R18</b>	1.31	1.25	1.97		<b>35</b>	.261		.668	
					<b>36</b>	.300		.668	
					<b>37</b>	.341		.786	
					<b>38</b>	.379		.786	
					<b>39</b>	.454		.899	

\*ND Seal bearings 8035 to 8039, based on extra small 30 bearings use same shoulders as type 30.

## New Departure Hyatt BALL BEARING ENGINEERING DATA

### SHAFT AND HOUSING SHOULDERS — Continued Double Row, Types 5000 and 5000W — Light and Medium Series

"Recommended" shaft and housing shoulder diameters should be used whenever possible to assure adequate support of bearing under all load conditions. These shoulders will resist the maximum thrust which may be safely applied to bearing without developing stresses detrimental to any of the metals used for shafts or housings, including aluminum. Little is gained by shaft or housing shoulders greater than recommended. Larger shoulders may interfere with closures of sealed or shielded bearings. In general "recommended" diameters expose enough inner ring face to allow removal without damage to sealed or shielded bearings.



"Minimum" shaft and "maximum" housing shoulder diameters are those considered necessary to align bearings properly and to provide ample resistance to light thrust loads.

Bear- ing Bore No.	LIGHT SERIES 5200				MEDIUM SERIES 5300				LIGHT SERIES 5200W			
	Shoulder Diameter				Shoulder Diameter				Shoulder Diameter			
	S		H		S		H		S		H	
	Rec.	Min.	Rec.	Max.	Rec.	Min.	Rec.	Max.	Rec.	Min.	Rec.	Max.
0	.546	.494	1.06		.656	.494	1.24					
1	.638	.572	1.13		.724	.632	1.26					
2	.750	.691	1.25		.811	.751	1.45					
3	.903	.829	1.37		1.02	.829	1.61	1.65				
4	1.09	.947	1.62		1.13	.947	1.81	1.85				
5	1.27	1.14	1.82		1.38	1.14	2.21	2.24	1.21	1.14	1.84	
6	1.53	1.34	2.18	2.24	1.64	1.34	2.60	2.64				
7	1.75	1.54	2.56	2.64	1.84	1.62	2.80	2.85	1.70	1.54	2.55	2.64
8	2.00	1.74	2.84	2.95	2.12	1.82	3.18	3.24				
9	2.19	1.93	3.03	3.15	2.40	2.01	3.55	3.64				
10	2.38	2.13	3.23	3.34	2.59	2.29	3.86	3.93	2.28	2.13	3.25	3.34
11	2.68	2.40	3.53	3.64	2.83	2.48	4.23	4.32	2.57	2.40	3.55	3.64
12	2.89	2.60	3.92	4.03	3.14	2.68	4.55	4.72	2.78	2.60	3.94	4.03
13	3.12	2.80	4.29	4.42	3.37	2.88	4.92	5.11	3.00	2.80	4.31	4.42
14	3.34	3.00	4.47	4.62	3.61	3.08	5.30	5.51				
15	3.55	3.19	4.65	4.82	3.81	3.27	5.69	5.90	3.41	3.19	4.67	4.82
16	3.83	3.47	4.96	5.11	4.04	3.47	6.06	6.29	3.68	3.47	4.99	5.11
17	4.08	3.67	5.32	5.50	4.33	3.75	6.37	6.59				
18	4.33	3.86	5.68	5.90	4.55	3.94	6.76	6.98	4.15	3.86	5.71	5.90
19	4.58	4.06	6.04	6.29								
20	4.83	4.26	6.40	6.69								
21												
22	5.50	4.65	7.19	7.47					4.92	4.65	7.32	7.47
24												

Bear- ing Bore No.	MEDIUM SERIES 5300W			
	Shoulder Diameter			
	S		H	
	Rec.	Min.	Rec.	Max.
6	1.54	1.34	2.54	2.64
7	1.80	1.62	2.77	2.85
9	2.25	2.01	3.52	3.64
10	2.45	2.29	3.82	3.93
11	2.65	2.48	4.18	4.32
12	2.88	2.68	4.53	4.72
14	3.10	2.88	4.90	5.11
20	4.70	4.34	7.80	7.96

## BEARING INSTALLATION

Bearing installation should take place under conditions of cleanliness consistent with the precision of the products involved. All tables, tools and fixtures should be clean and free from burrs which might break off and enter the bearing. An ample supply of clean, lint-free cloths should be available for wiping all components of the assembly. Bearings should be left in their factory-sealed packages until immediately before installation.

### SHAFTS

The bearing seat diameter should be checked to make sure it is within the specified tolerance, and the shaft shoulder fillet must be small enough to clear the bearing corner. The bearing seat should be wiped clean and lightly coated with oil to prevent galling during press-fitting. The bearing seat shoulder face should be square with the bearing seat. The entire bearing seat and shoulder face must be clean.

### HOUSINGS

Bore dimension of the housing bearing seat should be checked against the specified tolerance, and the shoulder fillet must be small enough to clear the bearing corner. All unfinished cast surfaces inside the housing should be cleaned and coated with a non-soluble engine enamel to seal the casting pores and thus prevent loosely embedded particles from entering the bearing chamber. All oil holes should be inspected to insure that they are clean and not plugged. The bearing seat should be thoroughly cleaned and lightly oiled to facilitate assembly.

### INTERFERENCE FITS

When a bearing is installed, the mounting force should be applied against the ring, and only the ring, which is being press-fitted. A bearing should never be forced onto a shaft by pressure or hammer blows applied to the outer ring, nor should the bearing be press-fitted into a housing by force applied to the inner ring.

Using an arbor press, the bearing may be laid on a face block which contacts only the bearing inner ring and which has a hole diameter greater than the bearing bore. The shaft is pressed through the bearing until it is seated firmly against the shaft shoulder.

If the shaft is not too long, it can be supported beneath the table of the arbor press and the bearing pressed onto it by ram pressure against a piece of soft metal tubing. The tubing must be clean, inside and out, and the inside diameter of the tubing should be slightly greater than the bearing bore. The ends of the tubing should be square (with corners chamfered to avoid flaking) and should contact only the bearing inner ring. The shaft must be held in line with the ram of the arbor press to avoid cocking the bearing on the shaft seat.

When an arbor press is not available, the bearing can be driven onto the shaft seat by *light* hammer blows against the end of the soft metal tubing. These blows should be made alternately against opposite sides of the tubing face, and great care must be taken to avoid cocking the bearing as it is driven onto the shaft seat.

### THERMAL EXPANSION METHOD

When a bearing must be pressed over a considerable length of shaft or over another tight fitting bearing seat before it reaches its own bearing seat, thermal expansion of the bearing often facilitates installation and prevents damage to the ground surfaces of both shaft and bearing bore. Immersion of bearings in hot oil to achieve thermal expansion is not recommended by New Departure Hyatt. Temperatures are hard to control and it is difficult to keep the oil clean. Two dry-heat methods are recommended.

In the first, bearings still sealed in their packages are placed on a shelf in an enclosure lined with foil reflector materials. Electric lamp bulbs warm the bearings. Temperatures from 150°F to 225°F are recommended. Temperatures should be controlled by thermostat, rather than by the less reliable method of controlling lamp size and the size of the enclosure.

The second method involves inserting a lamp bulb or electric heating element in the bearing bore. Temperature is controlled by predetermining the time required for heating and making sure the heating element is centered in the bearing bore. An advantage of this method is that the inner ring is heated but the outer ring remains relatively cool. This permits easy handling during installation. Bearings should not be heated above the recommended maximum, and prolonged heating should be avoided. Either or both of these conditions may cause reduction in bearing hardness and damage to lubricant or seals.

Immediately after removal from the heating device, the bearing should be slipped over the shaft to its required position and held firmly against its shaft shoulder (by hand or by gravity) until it contacts the shaft seat. Care must be taken not to cock the bearing during this operation. It is better to position the shaft vertically when using this method, so the weight of the bearing will maintain contact between the inner ring face and the shaft shoulder during cooling.

Thermal expansion methods are used sometimes in conjunction with arbor press mounting to reduce mounting pressures and prevent galling of bearing seats.

Installation problems can be quite varied. When encountered, consult your NDH Sales Engineer for recommendations.

### BEARING CLEANING PROCEDURE

All New Departure Hyatt bearings are cleaned, lubricated, and packaged under carefully controlled conditions. When received by the customer, they are ready for installation without additional cleaning or preparation. Most open type bearings are coated with a rust-preventive slush. This slush is compatible with most lubricants and generally need not be removed prior to bearing installation. The slush, however, is intended primarily as a rust-preventive and not for use as a lubricant. The proper type and grade of lubricant should be applied before the equipment is started.

New bearings require cleaning only if they have been exposed to dirt after removal from their packages. Bearings which have been in service often require cleaning during overhaul periods to remove accumulated dirt or deteriorated lubricants. The procedure outlined herein is suitable for the occasional cleaning of a small number of bearings. When large quantities of bearings are to be cleaned, special cleaning methods and installations can be recommended by your New Departure Hyatt Sales Engineer.

All cleaning operations should be conducted in a dirt-free area, and only clean, high quality solvents should be used.

Chlorinated solvents are not usually recommended for bearing cleaning because of rust hazards associated with certain types. Light transformer oils, spindle oils, or automotive flushing oils are suitable for cleaning bearings, but oils heavier than an SAE 10 motor oil are not recommended. The use of compressed air for blowing dirt out of bearings, or for drying solvents, is not encouraged because compressed air systems frequently carry moisture and dirt in the air. However, the use of filtered compressed air under controlled conditions has certain advantages where large quantities of bearings must be cleaned. Your New Departure Hyatt Sales Engineer will be glad to supply information and details for recommended systems. Under no circumstance should bearings be spun at high speed by a stream of compressed air during cleaning, as this may damage the balls and pathways because of dirt or insufficient lubrication.

#### CLEANING USED DISMOUNTED BEARINGS

Place bearings in a wire or mesh basket and suspend the basket in a container of clean petroleum solvent or kerosene. Allow them to soak, preferably 8 hours or more, until all hard deposits have softened. Old bearings on hand, which contain badly oxidized grease, may require soaking in hot, light oil (200° to 240°F) to soften the deposits. The basket should be agitated slowly in the oil from time to time. After deposits have softened in the hot oil, the bearings should be immersed in solvent for cleaning.

In extreme cases, immersion of bearings in a boiling solution of water and emulsifiable cleaners (e.g. grinding, cutting or floor cleaning compounds) may give better results. A stiff, high quality brush may be used to dislodge any solid particles in the bearing. If hot emulsion solutions have been used, the bearings must be thoroughly drained and all entrapped water removed. This may be accomplished by slowly rotating individual bearings while hot to evaporate the water from all surfaces or preferably by rinsing in a water-displacing solvent. Immediately after removing the water, the bearings should be immersed in a clean petroleum solvent for further cleaning.

After used bearings are thoroughly clean, their condition may be judged by hand rotation. This is done by applying a light hand thrust against one bearing ring while slowly rotating the other ring. This should be done for both directions of thrust. Smoothness felt in rotation will indicate whether the bearing is satisfactory for further service. Bearing looseness should be checked against that of a new bearing. Excessive looseness indicates bearing wear and should be cause for rejection.

Bearings which have been judged acceptable for re-use should be immediately rotated in light oil to displace the solvent completely. They should either be installed immediately, or all surfaces thoroughly coated with a good rust-preventive oil and wrapped in clean oilproof paper until ready for installation.

#### CLEANING USED MOUNTED BEARINGS

Bearings may often be cleaned without removing them from their mounted assembly. For usual types of contamination, hot light oil should be flushed through the bearing and housing while the shaft is rotated slowly. When badly oxidized deposits of grease or oil are present, hot water emulsions can be used in place of flushing oil. Following this, the emulsion should be drained and the housing flushed with hot light oil. The shaft should be rotated slowly and continually during these operations. In certain cases, an intermediate flushing with a mixture of alcohol and petroleum solvent, after the emulsion treatment, may be helpful.

The flushing oil should be completely drained and all oil holes and lubrication connections examined to make sure they are not clogged. Next, high grade mineral oil of the recommended viscosity should be added to the bearing chamber. Only enough oil to fill the chamber to the level specified by the machine manufacturer should be added.

If the bearing is lubricated with grease, and contamination is not severe fresh grease may be forced through the bearing to purge the old grease and any entrapped contaminant. This may be done, however, only if drain plugs are provided in the housing for exhausting the old grease. The type, quality and consistency of the fresh grease must conform to the machine builder's recommendation and must be compatible with the old grease.

After purge cleaning, the drain plugs should be removed and bearings operated for about twenty minutes before the drain plugs are replaced. This will allow excess lubricant to escape and prevent overheating of the bearings due to churning of the lubricant. For normal applications, the total amount of grease used should fill about one-third of the free air-space of the bearing chamber.

#### CLEANING USED SEALED OR SHIELDED BEARINGS

Double sealed or double shielded bearings generally cannot be cleaned. Normal practice is to inspect these bearings and re-use or reject them on the basis of smoothness and looseness. Single sealed or single shielded bearings may be cleaned satisfactorily by the methods outlined above if cleaning operations are repeated enough to assure removal of all entrapped contaminant.



mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches
1	0.0394	51	2.0079	101	3.9764	151	5.9449	201	7.9134	251	9.8819
2	0.0787	52	2.0472	102	4.0157	152	5.9843	202	7.9528	252	9.9212
3	0.1181	53	2.0866	103	4.0551	153	6.0236	203	7.9921	253	9.9606
4	0.1575	54	2.1260	104	4.0945	154	6.0630	204	8.0315	254	10.0000
5	0.1969	55	2.1654	105	4.1339	155	6.1024	205	8.0709	255	10.0394
6	0.2362	56	2.2047	106	4.1732	156	6.1417	206	8.1102	256	10.0787
7	0.2756	57	2.2441	107	4.2126	157	6.1811	207	8.1496	257	10.1181
8	0.3150	58	2.2835	108	4.2520	158	6.2205	208	8.1890	258	10.1575
9	0.3543	59	2.3228	109	4.2913	159	6.2598	209	8.2283	259	10.1969
10	0.3937	60	2.3622	110	4.3307	160	6.2992	210	8.2677	260	10.2362
11	0.4331	61	2.4016	111	4.3701	161	6.3386	211	8.3071	261	10.2756
12	0.4724	62	2.4409	112	4.4094	162	6.3780	212	8.3465	262	10.3150
13	0.5118	63	2.4803	113	4.4488	163	6.4173	213	8.3858	263	10.3543
14	0.5512	64	2.5197	114	4.4882	164	6.4567	214	8.4252	264	10.3937
15	0.5906	65	2.5591	115	4.5276	165	6.4961	215	8.4646	265	10.4331
16	0.6299	66	2.5984	116	4.5669	166	6.5354	216	8.5039	266	10.4724
17	0.6693	67	2.6378	117	4.6063	167	6.5748	217	8.5433	267	10.5118
18	0.7087	68	2.6772	118	4.6457	168	6.6142	218	8.5827	268	10.5512
19	0.7480	69	2.7165	119	4.6850	169	6.6535	219	8.6220	269	10.5906
20	0.7874	70	2.7559	120	4.7244	170	6.6929	220	8.6614	270	10.6299
21	0.8268	71	2.7953	121	4.7638	171	6.7323	221	8.7008	271	10.6693
22	0.8661	72	2.8346	122	4.8031	172	6.7717	222	8.7402	272	10.7087
23	0.9055	73	2.8740	123	4.8425	173	6.8110	223	8.7795	273	10.7480
24	0.9449	74	2.9134	124	4.8819	174	6.8504	224	8.8189	274	10.7874
25	0.9843	75	2.9528	125	4.9213	175	6.8898	225	8.8583	275	10.8268
26	1.0236	76	2.9921	126	4.9606	176	6.9291	226	8.8976	276	10.8661
27	1.0630	77	3.0315	127	5.0000	177	6.9685	227	8.9370	277	10.9055

**MILLIMETER TO INCH CONVERSION TABLE**

28	1.1024	78	3.0709	128	5.0394	178	7.0079	228	8.9764	278	10.9449
29	1.1417	79	3.1102	129	5.0787	179	7.0472	229	9.0157	279	10.9843
30	1.1811	80	3.1496	130	5.1181	180	7.0866	230	9.0551	280	11.0236
31	1.2205	81	3.1890	131	5.1575	181	7.1260	231	9.0945	281	11.0630
32	1.2598	82	3.2283	132	5.1969	182	7.1654	232	9.1339	282	11.1024
33	1.2992	83	3.2677	133	5.2362	183	7.2047	233	9.1732	283	11.1417
34	1.3386	84	3.3071	134	5.2756	184	7.2441	234	9.2126	284	11.1811
35	1.3780	85	3.3465	135	5.3150	185	7.2835	235	9.2520	285	11.2205
36	1.4173	86	3.3858	136	5.3543	186	7.3228	236	9.2913	286	11.2598
37	1.4567	87	3.4252	137	5.3937	187	7.3622	237	9.3307	287	11.2992
38	1.4961	88	3.4646	138	5.4331	188	7.4016	238	9.3701	288	11.3386
39	1.5354	89	3.5039	139	5.4724	189	7.4409	239	9.4094	289	11.3780
40	1.5748	90	3.5433	140	5.5118	190	7.4803	240	9.4488	290	11.4173
41	1.6142	91	3.5827	141	5.5512	191	7.5197	241	9.4882	291	11.4567
42	1.6535	92	3.6220	142	5.5906	192	7.5591	242	9.5276	292	11.4961
43	1.6929	93	3.6614	143	5.6299	193	7.5984	243	9.5669	293	11.5354
44	1.7323	94	3.7008	144	5.6693	194	7.6378	244	9.6063	294	11.5748
45	1.7717	95	3.7402	145	5.7087	195	7.6772	245	9.6457	295	11.6142
46	1.8110	96	3.7795	146	5.7480	196	7.7165	246	9.6850	296	11.6535
47	1.8504	97	3.8189	147	5.7874	197	7.7559	247	9.7244	297	11.6929
48	1.8898	98	3.8583	148	5.8268	198	7.7953	248	9.7638	298	11.7323
49	1.9291	99	3.8976	149	5.8661	199	7.8346	249	9.8031	299	11.7717
50	1.9685	100	3.9370	150	5.9055	200	7.8740	250	9.8425	300	11.8110

**New Departure Hyatt**  
**BALL BEARING ENGINEERING DATA**

fractions	decimals	fractions	decimals
	1/64... .015625		33/64... .515625
	1/32..... .03125		17/32..... .53125
	3/64... .046875		35/64... .546875
1/16..... .0625		9/16..... .5625	
	5/64... .078125		37/64... .578125
	3/32..... .09375		19/32..... .59375
	7/64... .109375		39/64... .609375
1/8..... .1250		5/8..... .6250	
	9/64... .140625		41/64... .640625
	5/32..... .15625		21/32..... .65625
	11/64... .171875		43/64... .671875
3/16..... .1875		11/16..... .6875	
	13/64... .203125		45/64... .703125
	7/32..... .21875		23/32..... .71875
	15/64... .234375		47/64... .734375
1/4..... .2500		3/4..... .7500	

**DECIMAL EQUIVALENTS — FRACTIONS OF AN INCH**

	17/64... .265625		49/64... .765625
	9/32..... .28125		25/32..... .78125
	19/64... .296875		51/64... .796875
5/16..... .3125		13/16..... .8125	
	21/64... .328125		53/64... .828125
	11/32..... .34375		27/32..... .84375
	23/64... .359375		55/64... .859375
3/8..... .3750		7/8..... .8750	
	25/64... .390625		57/64... .890625
	13/32..... .40625		29/32..... .90625
	27/64... .421875		59/64... .921875
7/16..... .4375		15/16..... .9375	
	29/64... .453125		61/64... .953125
	15/32..... .46875		31/32..... .96875
	31/64... .484375		63/64... .984375
1/2..... .5000		1..... 1.0000	

NOTE: While every care has been used in compiling this catalog, it is impossible to guarantee completeness and accuracy of data.

# NEW DEPARTURE HYATT BEARINGS

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## NEW DEPARTURE HYATT IBS WAREHOUSES

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Atlanta, Georgia 30336  
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### BRISTOL

780 James P. Casey Road  
Bristol, Connecticut 06010  
Phone (203) 582-6371

### DALLAS

Suite 506  
4656 Leston St.  
Dallas, Texas 75247  
Phone (214) 688-5412

### RENO

676 Dunn Circle  
Sparks, Nevada 89431  
Phone (702) 356-5150

### SANDUSKY

140 Liberty Court  
Midway Industrial Park  
Elyria, Ohio 44035  
Phone (216) 324-2525

## NEW DEPARTURE HYATT SALES OFFICES

### CALIFORNIA

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Santa Ana 92705  
(714) 432-0661

### CONNECTICUT

780 James P. Casey Road  
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