



SECTION 1

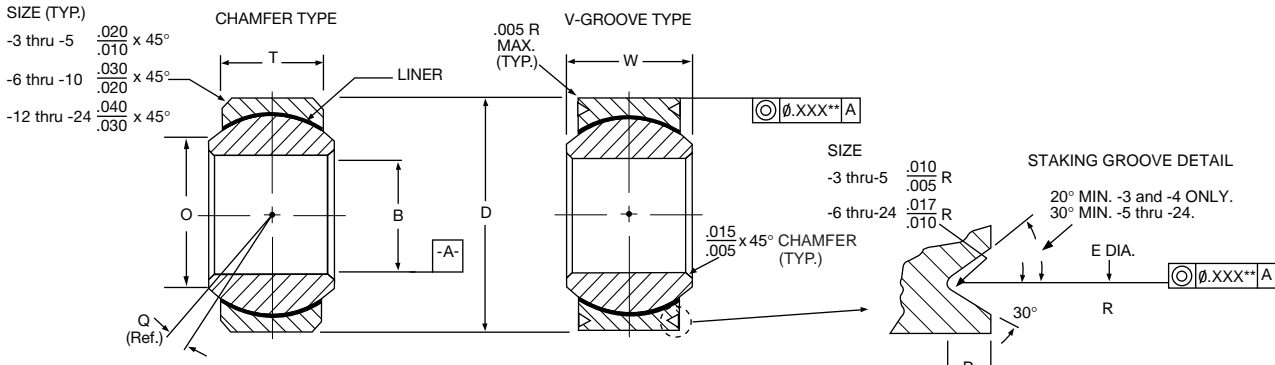
SPHERICAL BEARINGS – Self-Lubricating

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SPHERICAL BEARINGS – Self-Lubricating

AS81820 Narrow



Part Number	MS Dash No.	(B) Bore Diameter	(D) Outside Diameter	(W) Ball Width	(T) Race Width	(Q) Shoulder Diameter	Ball Diameter	(E) Pitch Diameter	(P) Groove Depth	(Q°) Misalignment	Limit Static Radial Load	Limit Static Axial Load	Dynamic Osc. Radial Load	Weight
V-Grooved*		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Degree	lbs.	lbs.	lbs.	lbs.
MS14101		+0.000	+0.000	+0.000	±.005	Min.	Ref.	+0.000	+0.000	Ref.				Ref.
MS14104		-0.005	-0.005	-0.002				-0.008	-0.010					
ADB3V(L)	-3	.1900	.5625	.281	.218	.293	.406	.500	.025	10°	3975	150	1500	.020
ADB4V(L)	-4	.2500	.6562	.343	.250	.364	.500	.594	.025	10°	6040	430	3320	.020
ADB5V(L)	-5	.3125	.7500	.375	.281	.419	.562	.650	.035	10°	8750	700	5460	.030
ADB5VA(L)	-5A	.3125	.7500	.375	.281	.419	.562	.660	.035	10°	8750	700	5460	.030
ADB6V(L)	-6	.3750	.8125	.406	.312	.475	.656	.712	.035	9°	10540	1100	6600	.040
ADB7V(L)	-7	.4375	.9062	.437	.343	.530	.718	.806	.035	8°	13200	1400	8050	.050
ADB8V(L)	-8	.5000	1.0000	.500	.390	.600	.813	.876	.055	8°	17900	2100	10400	.070
ADB9V(L)	-9	.5625	1.0937	.562	.437	.670	.875	.970	.055	8°	23200	3680	13000	.090
ADB10V(L)	-10	.6250	1.1875	.625	.500	.739	.968	1.063	.055	8°	30500	4720	16450	.120
ADB12V(L)	-12	.7500	1.4375	.750	.593	.920	1.187	1.313	.055	8°	46400	6750	23600	.210
ADB14V(L)	-14	.8750	1.5625	.875	.703	.980	1.312	1.438	.055	8°	62200	9350	30250	.270
ADB16V(L)	-16	1.0000	1.7500	1.000	.797	1.118	1.500	1.626	.055	8°	82200	12160	38000	.390
ADB18V(L)	-	1.1250	2.1250	1.125	.900	1.334	1.750	2.003	.055	8°	105880	13500	42350	.720
ADB20V(L)	-	1.2500	2.3125	1.250	1.000	1.473	1.937	2.190	.055	8°	131230	16930	52490	.930
ADB22V(L)	-	1.3750	2.5625	1.375	1.100	1.654	2.156	2.440	.055	8°	161700	20750	64680	1.280
ADB24V(L)	-	1.5000	2.8125	1.500	1.200	1.794	2.344	2.690	.055	8°	191973	24950	77110	1.670

*For chamfered version, delete 'V' from part number.

Notes:

- Bearing sizes 3 through 16 listed in the tables are approved for procurement to AS81820 and Aerospace Standards AS14101 through AS14104.
 - Bearing sizes 18 through 24 listed are not included in current Aerospace Standards, but are offered as NHBB catalog items only.
 - Temperature: Operating temperature range per AS81820 is -65° to 325°F. Broader temperature capabilities are achievable.
- **Concentricity .XXX is .003 for sizes -3 through -5. Concentricity .XXX is .005 for sizes -6 and up.

Materials

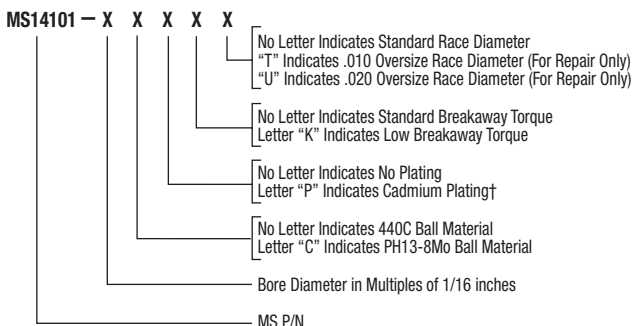
Part No.	Ball	Race	Liner
Catalog No.	CRES 440C AMS 5630 Rc55-62	CRES 17-4PH AMS 5643 Rc28-37	TEFLON®/Fabric Bonded to Race I.D. No Lub. Required
Catalog No. + 13-8	CRES PH13-8Mo AMS 5629 Rc43-47	CRES 17-4PH AMS 5643 Rc28-37	TEFLON®/Fabric Bonded to Race I.D. No Lub. Required

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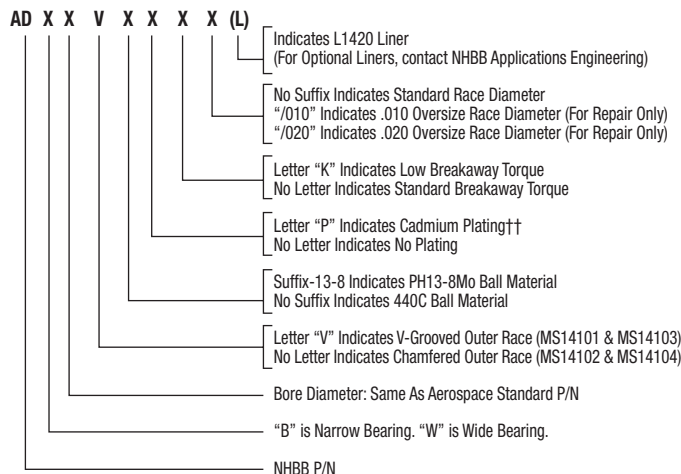


AS81820 Wide

Aerospace Standard P/N



NHBB P/N



† Cadmium plate MS14102 & MS14104 O.D. and O.D. chamfers per AMS-QQ-P-416, Type II, Class 2. Dimensions apply after plating.

†† Cadmium plate MS14101 & MS14103 O.D. and on the flats between the outside diameter and the grooves per AMS-QQ-P-416, Type II, Class 2. Dimensions apply after plating.

P/N Series	NHBB P/N	Description
MS14101	ADB V	Narrow Grooved
MS14102	ADW	Wide Chamfered
MS14103	ADW V	Wide Grooved
MS14104	ADB	Narrow Chamfered

Part Number	MS Dash No.	(B) Bore Diameter	(D) Outside Diameter	(W) Ball Width	(T) Race Width	(O) Shoulder Diameter	Ball Diameter	(E) Pitch Diameter	(P) Groove Depth	(Q°) Misalignment	Limit Static Radial Load	Limit Static Axial Load	Dynamic Osc. Radial Load	Weight
V-Grooved*		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Degree	lbs.	lbs.	lbs.	lbs.
MS14102		+ .0000	+ .0000	+ .000		Min.	Ref.	+ .000	+ .000	Ref.				Ref.
MS14103		- .0005	- .0005	- .002	± .005			- .008	- .010					
ADW3V(L)	-3	.1900	.6250	.437	.327	.300	.531	.563	.025	15°	2500	1770	4900	.031
ADW4V(L)	-4	.2500	.6250	.437	.327	.300	.531	.563	.025	15°	5500	1770	4900	.031
ADW5V(L)	-5	.3125	.6875	.437	.317	.360	.593	.625	.025	14°	9400	1640	6050	.035
ADW6V(L)	-6	.3750	.8125	.500	.406	.466	.687	.712	.035	8°	13700	2630	8310	.060
ADW7V(L)	-7	.4375	.9375	.562	.442	.537	.781	.837	.035	10°	20700	3650	11750	.080
ADW7V52(L)	-7A	.4375	.9062	.562	.442	.537	.781	.806	.035	10°	19700	3650	11750	.080
ADW8V(L)	-8	.5000	1.0000	.625	.505	.607	.875	.900	.035	9°	21400	4970	14950	.100
ADW9V(L)	-9	.5625	1.1250	.687	.536	.721	1.000	1.025	.035	10°	26600	5370	18100	.135
ADW10V(L)	-10	.6250	1.1875	.750	.567	.747	1.062	1.087	.035	12°	29000	6130	20250	.160
ADW12V(L)	-12	.7500	1.3750	.875	.630	.845	1.250	1.251	.035	13°	37000	7730	26200	.240
ADW14V(L)	-14	.8750	1.6250	.875	.755	.995	1.375	1.501	.035	6°	65200	10800	33600	.350
ADW16V(L)	-16	1.0000	2.1250	1.375	1.005	1.269	1.875	2.001	.055	12°	104000	19300	56250	.970
ADW18V(L)	-	1.1250	2.2500	1.437	1.067	1.338	1.968	2.128	.055	14°	142570	19640	57000	1.000
ADW20V(L)	-	1.2500	2.3750	1.500	1.130	1.460	2.093	2.253	.055	13°	159200	21970	63680	1.120
ADW20-5V(L)	-	1.2500	2.0000	1.093	.942	1.406	1.781	1.878	.055	6°	112360	14890	44940	.564
ADW22V(L)	-	1.3750	2.5625	1.687	1.223	1.535	2.281	2.440	.055	15°	190000	25970	76000	1.390
ADW24V(L)	-	1.5000	2.6875	1.687	1.223	1.693	2.390	2.567	.055	14°	199000	25970	79640	1.480

*For chamfered version, delete 'V' from part number.

No Load Breakaway Torque

Bore Sizes	Standard (in - lbs.)	"K" Type
3 & 4	.25 to 5.0	0 to 0.5
5 to 12	.25 to 8.0	0 to 1.0
14 & 16	.25 to 12.0	0 to 2.0
18 & 20	.25 to 18.0	0 to 2.0
22 & 24	.25 to 24.0	0 to 2.0

Radial and Axial Play

P/N Series MS14101 & MS14104

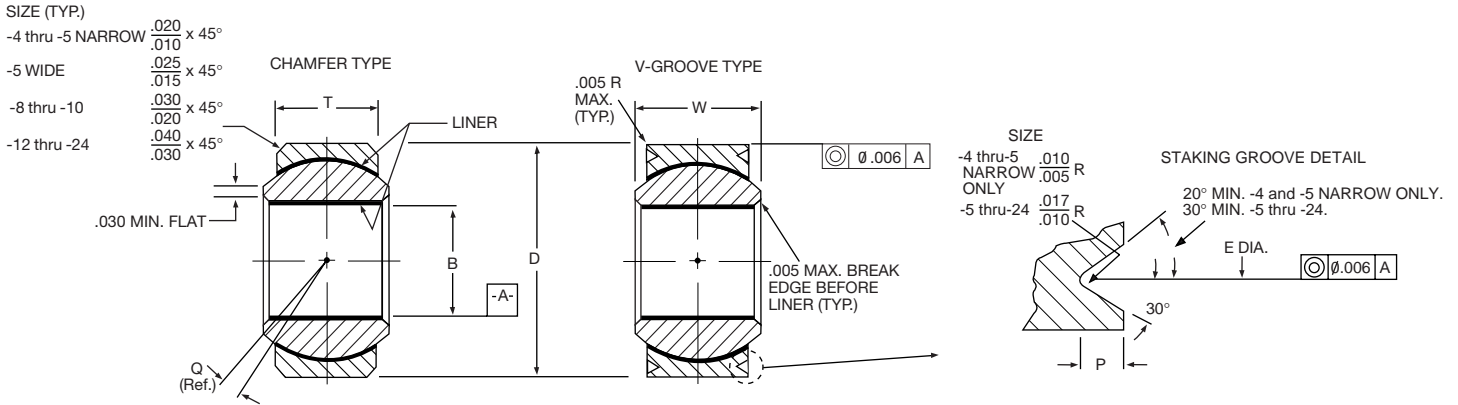
Bore Size	Max. Radial Play	Max. Axial Play
3K Thru 12K	0.0007 Inch	0.0028 Inch
14K Thru 16K	0.0010 Inch	0.0040 Inch

P/N Series MS14102 & MS14103

Bore Size	Max. Radial Play	Max. Axial Play
3K Thru 12K	0.0007 Inch	0.0021 Inch
14K Thru 16K	0.0010 Inch	0.0030 Inch

SPHERICAL BEARINGS – Self-Lubricating

AS81820 Lined Bore Series – Narrow



Part Number	MS Dash No.	(B) Bore Diameter	(D) Outside Diameter	(W) Ball Width	(T) Race Width	Ball Diameter	(E) Pitch Diameter	(P) Groove Depth	(Q°) Mis-alignment	Limit Static Radial Load	Limit Static Axial Load	Dynamic Osc. Radial Load	Weight
V-Grooved*		Inch	Inch	Inch	Inch	Inch	Inch	Inch	Degree	lbs.	lbs.	lbs.	lbs.
M81820/1		+0.0000	+0.0000	+0.000	±0.005	Ref.	+0.000	+0.000	Ref.				Ref.
M81820/4		-0.0010	-0.0005	-0.002			-0.008	-0.010					
ADBL4V(L)	-4	.2510	.6562	.343	.250	.500	.594	.025	10°	5550	430	2650	.020
ADBL5V(L)	-5	.3135	.7500	.375	.281	.562	.660	.035	10°	7700	700	3700	.030
ADBL6V(L)	-6	.3760	.8125	.406	.312	.656	.712	.035	9°	10200	1100	4900	.040
ADBL7V(L)	-7	.4385	.9062	.437	.343	.718	.806	.035	8°	12950	1400	6700	.050
ADBL8V(L)	-8	.5010	1.0000	.500	.390	.813	.876	.055	8°	17250	2100	8250	.070
ADBL9V(L)	-9	.5635	1.0937	.562	.437	.875	.970	.055	8°	22150	3680	10600	.090
ADBL10V(L)	-10	.6260	1.1875	.625	.500	.968	1.063	.055	8°	27700	4720	13250	.120
ADBL12V(L)	-12	.7510	1.4375	.750	.593	1.187	1.313	.055	8°	40600	6750	19400	.210
ADBL14V(L)	-14	.8760	1.5625	.875	.703	1.312	1.438	.055	8°	55950	9350	26750	.270
ADBL16V(L)	-16	1.0010	1.7500	1.000	.797	1.500	1.626	.055	9°	73800	12160	35250	.390
ADBL18V(L)	-	1.1260	2.1250	1.125	.900	1.750	2.001	.055	8°	94080	13500	37870	.720
ADBL20V(L)	-	1.2510	2.3125	1.250	1.000	1.937	2.188	.055	8°	116250	16930	46920	.930
ADBL22V(L)	-	1.3760	2.5625	1.375	1.100	2.156	2.438	.055	8°	140770	20750	56950	1.280
ADBL24V(L)	-	1.5010	2.8125	1.500	1.200	2.344	2.688	.055	8°	167630	24950	67950	1.670

*For chamfered version, delete 'V' from part number.

Notes:

- All dimensions, materials and configurations of sizes 4 through 16 conform to requirements of Aerospace Standards. Consult QPL for NHBB approvals to P/N series AS81820/1 through AS81820/4.
- Bearing sizes 18 thru 24 are not included in current Aerospace Standards but are offered as NHBB catalog items only.
- Temperature: Operating temperature range per AS81820 is -65° to 325°F. Broader temperature capabilities are achievable.

Materials

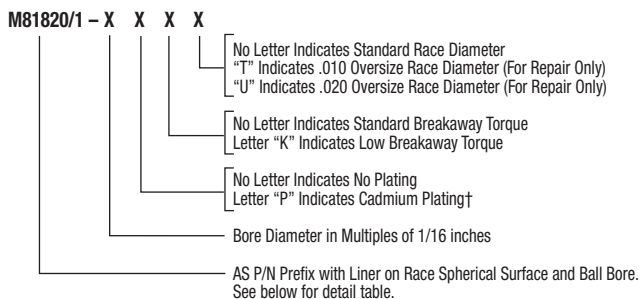
Part No.	Ball	Race	Liner
Catalog No.	CRES PH13-8Mo AMS 5629 Cond. H-1000 (Rc43 min.)	CRES 17-4PH AMS 5643 Rc28-37	TEFLON®/Fabric Bonded to Race I.D. & Ball Bore No Lub. Required

TEFLON® is a Du Pont registered trademark

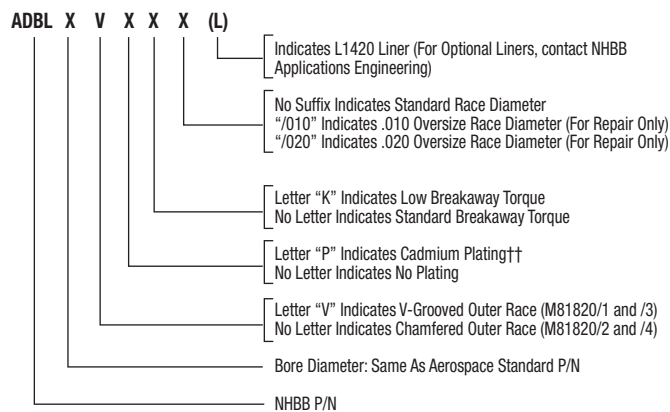


AS81820 Lined Bore Series – Wide

Aerospace Standard P/N



NHBB P/N



† Cadmium plate M81820/1 & M81820/3 O.D. and on the flats between the outside diameter and the grooves per AMS-QQ-P-416, Type II, Class 2. Dimensions apply after plating.
 †† Cadmium plate M81820/2 & M81820/4 O.D. and O.D. chamfers per AMS-QQ-P-416, Type II, Class 2. Dimensions apply after plating.

Aerospace Standard P/N	NHBB P/N	Description
M81820/1	ADBL V	Narrow Grooved
M81820/2	ADWL	Wide Chamfered
M81820/3	ADWL V	Wide Grooved
M81820/4	ADBL	Narrow Chamfered

Part Number	MS Dash No.	(B) Bore Diameter	(D) Outside Diameter	(W) Ball Width	(T) Race Width	Ball Diameter	(E) Pitch Diameter	(P) Groove Depth	(Q°) Mis-alignment	Limit Static Radial Load	Limit Static Axial Load	Dynamic Osc. Radial Load	Weight
M81820/2		Inch +.0000	Inch +.0000	Inch +.000	Inch	Inch Ref.	Inch +.000	Inch +.000	Degree Ref.	lbs. 9250	lbs. 1640	lbs. 4450	lbs. .035
M81820/3		-0.0010	-0.0005	-0.002	±.005		-0.008	-0.010					
ADWL5V(L)	-5	.3135	.6875	.437	.317	.593	.625	.025	14°	9250	1640	4450	.035
ADWL6V(L)	-6	.3760	.8125	.500	.406	.687	.712	.035	8°	13000	2630	6200	.060
ADWL7V(L)	-7	.4385	.9375	.562	.442	.781	.837	.035	10°	17300	3650	8250	.080
ADWL7V52(L)	-7A	.4385	.9062	.562	.442	.781	.806	.035	10°	17250	3650	8250	.080
ADWL8V(L)	-8	.5010	1.0000	.625	.505	.875	.900	.035	9°	21400	4970	10600	.100
ADWL9V(L)	-9	.5635	1.1250	.687	.536	1.000	1.025	.035	10°	26600	5370	13200	.135
ADWL10V(L)	-10	.6260	1.1875	.750	.567	1.062	1.087	.035	12°	29000	6130	16150	.160
ADWL12V(L)	-12	.7510	1.3750	.875	.630	1.250	1.251	.055	13°	37000	7730	24800	.240
ADWL14V(L)	-14	.8760	1.6250	.875	.755	1.375	1.501	.055	6°	56000	10800	26750	.350
ADWL16V(L)	-16	1.0010	2.1250	1.375	1.005	1.875	2.001	.055	12°	103300	19300	49300	.970
ADWL18V(L)	-	1.1260	2.2500	1.437	1.067	1.968	2.126	.055	14°	120410	19640	48760	1.000
ADWL20V(L)	-	1.2510	2.3750	1.500	1.130	2.093	2.251	.055	13°	139690	21970	56620	1.120
ADWL20-5V(L)	-	1.2510	2.0000	1.093	.942	1.781	1.876	.055	6°	101540	14890	40840	.564
ADWL22V(L)	-	1.3760	2.5625	1.687	1.223	2.281	2.438	.055	15°	172940	25970	70250	1.390
ADWL24V(L)	-	1.5010	2.6875	1.687	1.223	2.390	2.563	.055	14°	188670	25970	76640	1.480

*For chamfered version, delete 'V' from part number.

No Load Breakaway Torque

Bore Sizes	Standard (in - lbs.)	"K" Type
4 (Narrow only)	1.0 to 5.0	0 to 0.5
5 to 12	1.0 to 15.0	0 to 1.0
14 to 24	1.0 to 25.0	0 to 2.0

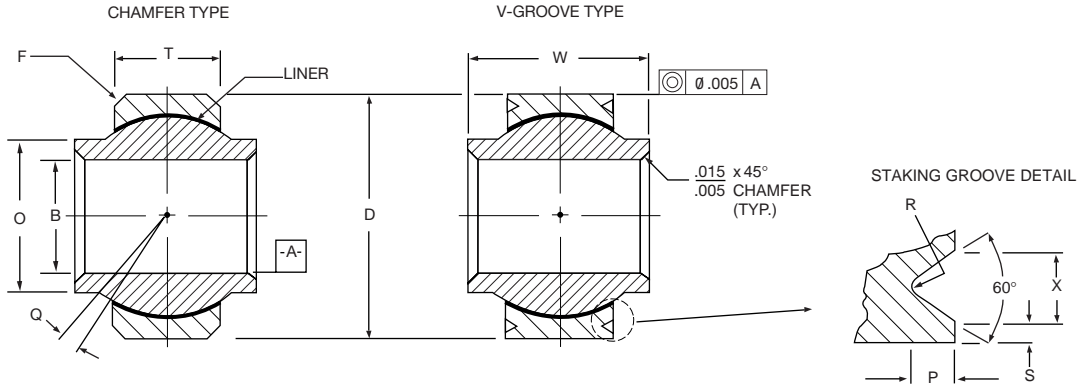
Radial and Axial Play

P/N Series M81820/1 & M81820/4		
Bore Size	Max. Radial Play	Max. Axial Play
3K Thru 12K	0.0007 Inch	0.0028 Inch
14K Thru 16K	0.0010 Inch	0.0040 Inch

P/N Series M81820/2 & M81820/3		
Bore Size	Max. Radial Play	Max. Axial Play
3K Thru 12K	0.0007 Inch	0.0021 Inch
14K Thru 16K	0.0010 Inch	0.0030 Inch

SPHERICAL BEARINGS – Self-Lubricating

High Misalignment



Part Number V-Grooved*	(B)	(D)	(W)	(T)	(O)	Ball Diameter	(F)	(Q)	(P)	(R) (S) (X)			No Load Rotational Breakaway Torque	Limit Static Radial Load	Dynamic Osc. Radial Load	Weight
	Bore Diameter	Outside Diameter	Ball Width	Race Width	Shoulder Diameter		Race Chamfered x 45°	Mis-alignment		Staking Groove Data						
	Inch	Inch	Inch	Inch	Inch	Inch	Inch	Ref.	Inch	Inch	Inch	Inch	Inch - lbs.	lbs.	lbs.	lbs.
	+0.000 -0.005	+0.000 -0.005	+0.000 -0.005	+0.010 -0.000	Ref.	Ref.	+0.000 -0.010		+0.000 -0.015	+0.000 -0.010	+0.000 -0.010	+0.000 -0.010				Ref.
ADBY3V(L)	.1900	.5625	.500	.205	.319	.437	.020	15°	.030	.015	.020	.045	.25-5	6440	3780	.018
ADBY4V(L)	.2500	.7400	.593	.250	.390	.593	.020	24°	.030	.015	.020	.045	.25-5	10790	5390	.036
ADBY5V(L)	.3125	.6875	.625	.250	.418	.593	.020	20°	.030	.015	.020	.045	1-15	10790	5390	.029
ADBY6V(L)	.3750	.9060	.813	.340	.512	.781	.030	23°	.030	.015	.020	.045	1-15	19170	9580	.068
ADBY7V(L)	.4375	1.0000	.875	.340	.618	.875	.030	22°	.030	.015	.020	.045	1-15	21720	10860	.095
ADBY8V(L)	.5000	1.1250	.937	.396	.730	1.000	.030	20°	.030	.015	.020	.045	1-15	28810	14400	.159
ADBY10V(L)	.6250	1.3750	1.200	.562	.856	1.250	.030	20°	.040	.020	.030	.055	1-15	50260	25130	.245
ADBY12V(L)	.7500	1.5625	1.280	.615	.970	1.375	.040	18°	.060	.020	.030	.080	1-15	60500	30250	.315
ADBY14V(L)	.8750	1.7500	1.400	.620	1.140	1.531	.040	18°	.060	.020	.030	.080	1-24	68640	34320	.430
ADBY16V(L)	1.0000	2.1250	1.875	.830	1.278	1.875	.040	21°	.060	.020	.030	.080	1-24	111280	55640	.831
ADBY18V(L)	1.1250**	2.3125**	1.875	.937	1.400	2.062	.040	20°	.060	.020	.030	.080	1-24	138100	68970	1.096
ADBY20V(L)	1.2500**	2.5000**	1.875	1.000	1.523	2.250	.040	21°	.060	.020	.030	.080	1-24	160660	80330	1.318
ADBY22V(L)	1.3750**	2.7500**	2.125	1.093	1.670	2.500	.040	22°	.060	.020	.030	.080	1-24	195310	97550	1.800
ADBY24V(L)	1.5000**	3.0000**	2.250	1.170	1.800	2.672	.040	21°	.060	.020	.030	.080	1-24	223470	111740	2.223

* For chamfered version, delete 'V' from part number.
 ** Bore and O.D. tolerances: +.0000, -.0008.

Notes:

- Temperature: Operating temperature range -65° to 325°F. Broader temperature capabilities are achievable.
- Options: Bearings with PH13-8Mo balls will be designated by "13-8" suffix (Example: ADBY16-13-8(L)). For outside race diameter with plate per AMS-QQ-P-416, Type II, Class 2, add suffix "P" (Example: ADBY16VP(L)).
- Qualification: Liner approved to AS81820.

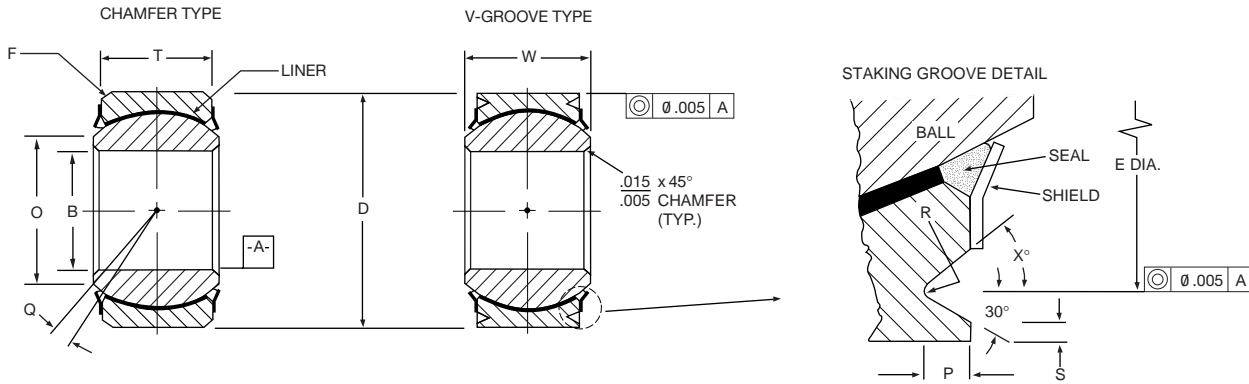
Materials

Part No.	Ball	Race	Liner
Catalog No.	CRES 440C AMS 5630 Rc55-62	CRES 17-4PH AMS 5643 Rc28-37	TEFLON®/Fabric Bonded to Race I.D. No Lub. Required
Catalog No. + 13-8	CRES PH13-8Mo AMS 5629 Rc43-47	CRES 17-4PH AMS 5643 Rc28-37	TEFLON®/Fabric Bonded to Race I.D. No Lub. Required

TEFLON® is a Du Pont registered trademark

SPHERICAL BEARINGS – Self-Lubricating

Sealed Narrow



Part Number V-Grooved*	(B)	(D)	(W)	(T)	(O)	Ball Diameter	(F)	(Q)	(E)	(P)	(R)	(X)	No Load Rotational Breakaway Torque	Limit Static Radial Load	Limit Static Axial Load	Dynamic Osc. Radial Load	Weight
	Bore Diameter	Outside Diameter	Ball Width	Race Width	Shoulder Diameter		Race Chamfered x45°	Mis- alignment	Pitch Diam.	Staking Groove Data							
	Inch +.0000 -.0005	Inch +.0000 -.0005	Inch +.000 -.002	Inch ±.005	Inch Min.	Inch Ref.	Inch +.000 -.010	Min.	Inch +.000 -.010	Inch +.000 -.015	Inch		Inch - lbs.	lbs.	lbs.	lbs.	lbs.
ADB3VN(L)	.1900	.5625	.281	.218	.293	.406	.020	5°	.502	.030	.005-.010	20° min.	.25-8.0	3975	150	1500	.020
ADB4VN(L)	.2500	.6562	.343	.250	.364	.500	.020	5°	.596	.030	.005-.010	20° min.	.25-8.0	6040	430	3320	.020
ADB5VN(L)	.3125	.7500	.375	.281	.419	.562	.020	5°	.652	.040	.005-.010	30°	1.0-20.0	8750	700	5460	.030
ADB5VAN(L)	.3125	.7500	.375	.281	.419	.562	—	5°	.662	.040	.005-.010	20°	1.0-20.0	8750	700	5460	.030
ADB6VN(L)	.3750	.8125	.406	.312	.475	.656	.030	4.5°	.714	.040	.010-.020	30°	1.0-20.0	10540	1100	6600	.040
ADB7VN(L)	.4375	.9062	.437	.343	.530	.718	.030	4°	.808	.040	.010-.020	30°	1.0-20.0	13200	1400	8050	.050
ADB8VN(L)	.5000	1.0000	.500	.390	.600	.813	.030	4°	.878	.060	.010-.020	30°	1.0-20.0	17900	2100	10400	.070
ADB9VN(L)	.5625	1.0937	.562	.437	.670	.875	.030	4°	.972	.060	.010-.020	30°	1.0-20.0	23200	3680	13000	.090
ADB10VN(L)	.6250	1.1875	.625	.500	.739	.968	.030	4°	1.065	.060	.010-.020	30°	1.0-20.0	30500	4720	16450	.120
ADB12VN(L)	.7500	1.4375	.750	.593	.920	1.187	.040	4°	1.315	.060	.010-.020	30°	1.0-20.0	46400	6750	23600	.210
ADB14VN(L)	.8750	1.5625	.875	.703	.980	1.312	.040	4°	1.440	.060	.010-.020	30°	1.0-30.0	62200	9350	30250	.270
ADB16VN(L)	1.0000	1.7500	1.000	.797	1.118	1.500	.040	4.5°	1.628	.060	.010-.020	30°	1.0-30.0	82200	12160	38000	.390
ADB18VN(L)	1.1250	2.1250	1.125	.900	1.334	1.750	.040	4°	2.003	.060	.010-.020	30°	1.0-30.0	105880	13500	42350	.720
ADB20VN(L)	1.2500	2.3125	1.250	1.000	1.473	1.937	.040	4°	2.190	.060	.010-.020	30°	1.0-30.0	131230	16930	52490	.930
ADB22VN(L)	1.3750	2.5625	1.375	1.100	1.654	2.156	.040	4°	2.440	.060	.010-.020	30°	1.0-30.0	161700	20750	64680	1.280
ADB24VN(L)	1.5000	2.8125	1.500	1.200	1.794	2.344	.040	4°	2.690	.060	.010-.020	30°	1.0-30.0	192780	24950	77110	1.670

*For chamfered version, delete 'V' from part number.

Notes:

- For more information on sealed bearings, see page 70.
- Temperature: Operating temperature range -65° to 325°F. Broader temperature capabilities are achievable.
- Options: Bearings with PH13-8Mo balls will be designated by "13-8" suffix (Example: ADB16VN13-8(L)). For outside race diameter with cadmium plate per AMS-QQ-P-416, Type II, Class 2, add suffix "P" (Example: ADW16VNP(L)).
- Qualification: Liner approved to AS81820.

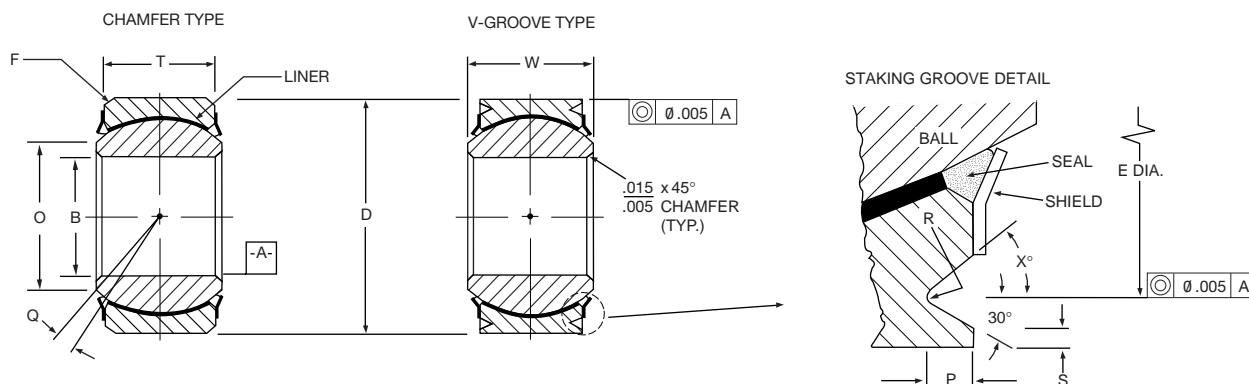
Materials

Part No.	Ball	Race	Liner
Catalog No.	CRES 440C AMS 5630 Rc55-62	CRES 17-4PH AMS 5643 Rc28-37	TEFLON®/Fabric Bonded to Race I.D. No Lub. Required
Catalog No. + 13-8	CRES PH13-8Mo AMS 5629 Rc43-47	CRES 17-4PH AMS 5643 Rc28-37	TEFLON®/Fabric Bonded to Race I.D. No Lub. Required

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Sealed Wide



Part Number V-Grooved*	(B)	(D)	(W)	(T)	(O)	(F)	(Q)	(E)	(P)	(R)	(X)	No Load Rotational Breakaway Torque	Limit Static Radial Load	Limit Static Axial Load	Dynamic Osc. Radial Load	Weight	
	Bore Diameter	Outside Diameter	Ball Width	Race Width	Shoulder Diameter	Ball Diameter	Race Chamfered x 45°	Mis- alignment	Pitch Diam.	Staking Groove Data							Inch - lbs.
	Inch +.0000 -.0005	Inch +.0000 -.0005	Inch +.000 -.002	Inch ±.005	Inch Min.	Inch Ref.	Inch +.000 -.010	Min.	Inch +.000 -.010	Inch +.000 -.015	Inch						
ADW3VN(L)	.1900	.6250	.437	.327	.300	.531	.025	7.5°	.565	.030	.005-.015	20° min.	.25-8.0	2500	1770	4900	.031
ADW4VN(L)	.2500	.6250	.437	.327	.300	.531	.025	7.5°	.565	.030	.005-.015	20° min.	.25-8.0	5500	1770	4900	.031
ADW5VN(L)	.3125	.6875	.437	.317	.360	.593	.025	7°	.627	.030	.005-.015	30°	1.0-20.0	9400	1640	6050	.035
ADW6VN(L)	.3750	.8125	.500	.406	.466	.687	.030	4°	.714	.040	.010-.020	30°	1.0-20.0	13700	2630	8310	.060
ADW7VN(L)	.4375	.9375	.562	.442	.537	.781	.030	5°	.839	.040	.010-.020	30°	1.0-20.0	20700	3650	11750	.080
ADW7V52N(L)	.4375	.9062	.562	.442	.537	.781	—	5°	.808	.040	.010-.020	30°	1.0-20.0	19700	3650	11750	.080
ADW8VN(L)	.5000	1.0000	.625	.505	.607	.875	.030	4.5°	.902	.040	.010-.020	30°	1.0-20.0	21400	4970	14950	.100
ADW9VN(L)	.5625	1.1250	.687	.536	.721	1.000	.030	5°	1.027	.040	.010-.020	30°	1.0-20.0	26600	5370	18100	.135
ADW10VN(L)	.6250	1.1875	.750	.567	.747	1.062	.030	6°	1.089	.040	.010-.020	30°	1.0-20.0	29000	6130	20250	.160
ADW12VN(L)	.7500	1.3750	.875	.630	.845	1.250	.040	7.5°	1.253	.060	.010-.020	30°	1.0-20.0	37000	7730	26200	.240
ADW14VN(L)	.8750	1.6250	.875	.755	.995	1.375	.040	3°	1.503	.060	.010-.020	30°	1.0-30.0	65200	10800	33600	.350
ADW16VN(L)	1.0000	2.1250	1.375	1.005	1.269	1.875	.040	6°	2.003	.060	.010-.020	30°	1.0-30.0	104000	19300	56250	.970
ADW18VN(L)	1.1250	2.2500	1.437	1.067	1.338	1.968	.040	7°	2.128	.060	.010-.020	30°	1.0-30.0	142570	19640	57000	1.000
ADW20VN(L)	1.2500	2.3750	1.500	1.130	1.460	2.093	.040	6.5°	2.253	.060	.010-.020	30°	1.0-30.0	159200	21970	63680	1.120
ADW20-5VN(L)	1.2500	2.0000	1.093	.942	1.406	1.781	.040	3°	1.878	.060	.010-.020	30°	1.0-30.0	112360	14890	44940	.564
ADW22VN(L)	1.3750	2.5625	1.687	1.223	1.535	2.281	.040	7.5°	2.440	.060	.010-.020	30°	1.0-30.0	190000	25970	76000	1.390
ADW24VN(L)	1.5000	2.6875	1.687	1.223	1.693	2.390	.040	7°	2.567	.060	.010-.020	30°	1.0-30.0	199000	25970	79640	1.480

*For chamfered version, delete 'V' from part number.

Notes:

- For more information on sealed bearings, see page 70.
- Temperature: Operating temperature range -65° to 325°F. Broader temperature capabilities are achievable.
- Options: Bearings with PH13-8Mo balls will be designated by "13-8" suffix (Example: ADB16VN13-8(L)). For outside race diameter with cadmium plate per AMS-QQ-P-416, Type II, Class 2, add suffix "P" (Example: ADW16VNP(L)).
- Qualification: Liner approved to AS81820.

Materials

Part No.	Ball	Race	Liner
Catalog No.	CRES 440C AMS 5630 Rc55-62	CRES 17-4PH AMS 5643 Rc28-37	TEFLON®/Fabric Bonded to Race I.D. No Lub. Required
Catalog No. + 13-8	CRES PH13-8Mo AMS 5629 Rc43-47	CRES 17-4PH AMS 5643 Rc28-37	TEFLON®/Fabric Bonded to Race I.D. No Lub. Required

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