

EXTERNAL BOWED

PHONE: 516.328.3300 • FAX: 516.326.8827 • WWW.SDP-SI.COM

RADIAL ASSEMBLY
FOR END-PLAY TAKE-UP

> MATERIAL:

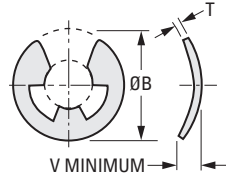
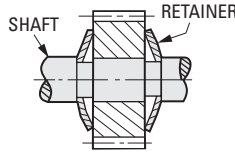
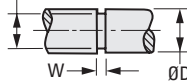
Stainless Steel (PH 15-7 Mo)

> SPECIFICATIONS:

G Tolerance:

.095 to .147 in. +.002/-.000

.210 to .675 in. +.003/-.000



INCH COMPONENT

Catalog Number	D Shaft Dia.		B Ring O.D.	G Groove Dia.	W Groove Width +.003 - .000	T Ring Thick. ± .002	V Min.	End Play Takeup	Approx. Force Required to Flatten Rings lbf
	Fraction	Decimal							
S73KW2-131-12	1/8	.125	.230	.095	.022	.010*	.025	.005	8
S73KW2-131-18	3/16	.188	.335	.147	.030	.015	.033	.007	12
S73KW2-131-25	1/4	.250	.527	.210	.047	.025	.050	.010	35
S73KW2-131-31	5/16	.312	.500	.250	.047	.025	.050	.010	30
S73KW2-131-37	3/8	.375	.660	.303	.060	.035	.060	.010	55
S73KW2-131-43	7/16	.438	.687	.343	.060	.035	.060	.010	50
S73KW2-131-50	1/2	.500	.800	.396	.073	.042	.075	.014	90
S73KW2-131-62	5/8	.625	.940	.485	.077	.042	.080	.014	85
S73KW2-131-75	3/4	.750	1.120	.580	.085	.050	.090	.016	110
S73KW2-131-87	7/8	.875	1.300	.675	.085	.050	.090	.016	120

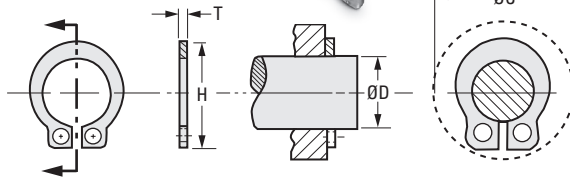
* Thickness tolerance: ± .001

EXTERNAL GROOVELESS

FOR AXIAL ASSEMBLY
NO GROOVE REQUIRED

> MATERIAL:

Stainless Steel (PH 15-7 Mo)



INCH COMPONENT

Catalog Number	D Shaft Dia.		C Ring Clearance Dia.	H Ring Height	Thickness		Allowable Load lbf	
	Fraction	Decimal			T	Tolerance		
		From						To
S73NW2-GR555-09	3/32	.092	.096	.26	.207	.025	± .002	8
S73NW2-GR555-12	1/8	.123	.127	.33	.268	.025	± .002	10
S73NW2-GR555-15	5/32	.154	.158	.36	.307	.025	± .002	12
S73NW2-GR555-18	3/16	.185	.189	.44	.364	.035	± .003	20
S73NW2-GR555-25	1/4	.248	.252	.49	.437	.035	± .003	23
S73NW2-GR555-31	5/16	.310	.316	.68	.553	.042	± .003	25
S73NW2-GR555-37	3/8	.373	.379	.74	.620	.042	± .003	30
S73NW2-GR555-43	7/16	.434	.440	.81	.701	.050	± .003	40
S73NW2-GR555-50	1/2	.497	.503	.90	.768	.050	± .003	45
S73NW2-GR555-62	5/8	.622	.628	1.06	.948	.062	± .004	60
S73NW2-GR555-75	3/4	.745	.755	1.32	1.115	.062	± .004	65



EXTERNAL

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► MATERIAL:

Stainless Steel (PH 15-7 Mo)

► SPECIFICATIONS:

A Tolerance:

- .225 in. +.002/- .004
- .250 to .461 in. +.002/- .005
- .509 to .925 in. +.005/- .010
- 1.041 to 1.387 in. +.010/- .015
- 1.446 to 1.503 in. +.013/- .020

G Tolerance:

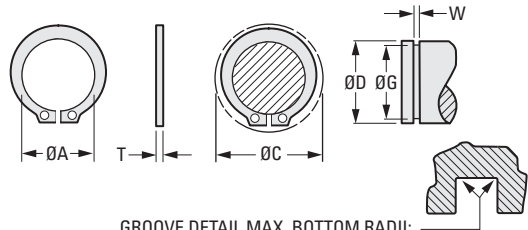
- .230 in. ± .0015
- .255 to .530 in. ± .002
- .588 to .940 in. ± .003
- 1.059 to 1.406 in. ± .004
- 1.468 to 1.529 in. ± .005

W Tolerance:

- .029 to .046 in. +.003/- .000
- .056 to .068 in. +.004/- .000

T Tolerance:

- .025 to .050 in. ± .002
- .062 in. ± .003



GROOVE DETAIL MAX. BOTTOM RADII:
 .003 (S73HW2-100-025 THRU S73HW2-100-035)
 .005 (S73HW2-100-037 THRU S73HW2-100-100)
 .010 (S73HW2-100-112 THRU S73HW2-100-162)

INCH COMPONENT

Catalog Number	A Free Dia.	C Ring Clear. Dia.	D Shaft Dia.	G Groove Dia.	W Groove Width	T ^Δ Ring Thick.	Thrust Strength* Load lbf	
							Ring	Groove
S73HW2-100-025	.225	.45	.250	.230	.029	.025	590	175
S73HW2-100-027	.250	.48	.276	.255	.029	.025	650	195
S73HW2-100-028	.256	.49	.281	.261	.029	.025	660	200
S73HW2-100-031	.281	.54	.312	.290	.029	.025	740	240
S73HW2-100-034	.309	.57	.344	.321	.029	.025	800	265
S73HW2-100-035	.320	.58	.354	.330	.029	.025	820	300
S73HW2-100-037	.338	.60	.375	.352	.029	.025	870	320
S73HW2-100-039	.354	.62	.394	.369	.029	.025	940	335
S73HW2-100-043	.395	.66	.438	.412	.029	.025	1020	400
S73HW2-100-046	.428	.69	.469	.443	.029	.025	1100	450
S73HW2-100-050	.461	.77	.500	.468	.039	.035	1650	550
S73HW2-100-055	.509	.81	.551	.519	.039	.035	1800	600
S73HW2-100-056	.521	.82	.562	.530	.039	.035	1850	650
S73HW2-100-062	.579	.90	.625	.588	.039	.035	2060	800
S73HW2-100-068	.635	1.01	.688	.646	.046	.042	3400	1000
S73HW2-100-075	.693	1.09	.750	.704	.046	.042	3700	1200
S73HW2-100-087	.810	1.21	.875	.821	.046	.042	4300	1650
S73HW2-100-100	.925	1.41	1.000	.940	.046	.042	4950	2100
S73HW2-100-112	1.041	1.55	1.125	1.059	.056	.050	6600	2600
S73HW2-100-118	1.098	1.61	1.187	1.118	.056	.050	7000	2950
S73HW2-100-125	1.156	1.69	1.250	1.176	.056	.050	7350	3250
S73HW2-100-131	1.214	1.75	1.312	1.232	.056	.050	7750	3700
S73HW2-100-137	1.272	1.80	1.375	1.291	.056	.050	8100	4100
S73HW2-100-143	1.333	1.87	1.438	1.350	.056	.050	8500	4500
S73HW2-100-150	1.387	1.99	1.500	1.406	.056	.050	8800	5000
S73HW2-100-156	1.446	2.10	1.562	1.468	.068	.062	11400	5200
S73HW2-100-162	1.503	2.17	1.625	1.529	.068	.062	11850	5500

^Δ Max. ring thickness will be at least .002 less than listed minimum groove width **W**.

* Thrust Strength Factor of Safety: Rings = 4 Grooves = 2

EXTERNAL

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> MATERIAL:

Beryllium Copper (Berylco 25)
Carbon Spring Steel (SAE 1065 - 1090), Oil-Dipped

> TENSILE STRENGTH:

45,000 psi

> SPECIFICATIONS:

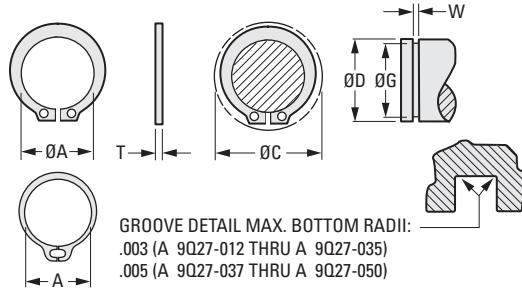
A Tolerance:
.112 to .225 in. +.002/-.004
.250 to .461 in. +.002/-.005

G Tolerance:
.117 to .230 in. ± .0015
.255 to .468 in. ± .002

W Tolerance:
.012 to .018 in. +.002/-.000
.029 to .039 in. +.003/-.000

T Tolerance:
.010 in. ± .001
.015 to .035 in. ± .002

Priced Per 100 Pieces



INCH COMPONENT

Catalog Number	A Free Dia.	C Ring Clear. Dia.	D Shaft Dia.	G Groove Dia.	W Groove Width	T Ring Thick.	Thrust Strength* lbf Max.	
							Ring	Groove
Beryllium Copper (Berylco 25)								
A 9Q27-012	.112	.22	.125	.117	.012	.010	112	35
A 9Q27-015	.142	.27	.156	.146	.012	.010	132	55
A 9Q27-018	.168	.30	.188	.175	.018	.015	244	80
A 9Q27-019	.179	.32	.197	.185	.018	.015	254	85
A 9Q27-021	.196	.33	.219	.205	.018	.015	284	110
A 9Q27-023	.215	.36	.236	.222	.018	.015	315	120
Carbon Spring Steel (SAE 1065 - 1090), Oil-Dipped								
A 9Q27-025	.225	.45	.250	.230	.029	.025	599	175
A 9Q27-027	.250	.48	.276	.255	.029	.025	660	195
A 9Q27-028	.256	.49	.281	.261	.029	.025	670	200
A 9Q27-031	.281	.54	.312	.290	.029	.025	751	240
A 9Q27-034	.309	.57	.344	.321	.029	.025	812	265
A 9Q27-035	.320	.58	.354	.330	.029	.025	832	300
A 9Q27-037	.338	.60	.375	.352	.029	.025	883	320
A 9Q27-039	.354	.62	.394	.369	.029	.025	954	335
A 9Q27-040	.366	.63	.406	.382	.029	.025	964	350
A 9Q27-043	.395	.66	.438	.412	.029	.025	1035	400
A 9Q27-046	.428	.69	.469	.443	.029	.025	1117	450
A 9Q27-050	.461	.77	.500	.468	.039	.035	1675	550

* Thrust Strength Factor of Safety: Rings = 4 Grooves = 2

Continued on the next page



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> MATERIAL:

Carbon Spring Steel (SAE 1065 - 1090), Oil-Dipped

> TENSILE STRENGTH:

45,000 psi

> SPECIFICATIONS:

A Tolerance:

.579 to .925 in. +.005/-0.10
 1.041 to 1.156 in. +.010/-0.15
 1.446 to 1.850 in. +.013/-0.20
 1.964 to 2.313 in. +.015/-0.25
 2.543 to 2.775 in. +.020/-0.30

G Tolerance:

.588 to .940 in. ± .003
 1.059 to 1.176 in. ± .004
 1.468 to 1.886 in. ± .005
 2.003 to 2.838 in. ± .006

W Tolerance:

.039 to .046 in. +.003/-0.000
 .056 to .068 in. +.004/-0.000
 .086 to .103 in. +.005/-0.020

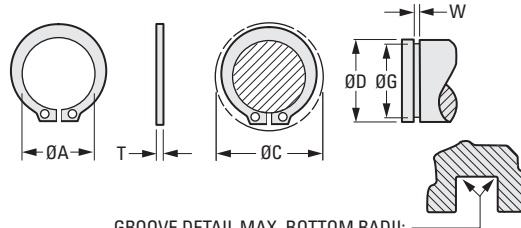
T Tolerance:

.035 to .050 in. ± .002
 .062 to .093 in. ± .003

Priced Per 100 Pieces



Carbon Spring Steel



GROOVE DETAIL MAX. BOTTOM RADIUS:
 .005 (A 9Q27-062 THRU A 9Q27-087)
 .010 (A 9Q27-100 THRU A 9Q27-300)

INCH COMPONENT

Catalog Number	A Free Dia.	C Ring Clear. Dia.	D Shaft Dia.	G Groove Dia.	W Groove Width	T Ring Thick.	Thrust Strength* lbf Max.	
							Ring	Groove
A 9Q27-062	.579	.90	.625	.588	.039	.035	2091	800
A 9Q27-075	.693	1.09	.750	.704	.046	.042	3756	1200
A 9Q27-087	.810	1.21	.875	.821	.046	.042	4365	1650
A 9Q27-100	.925	1.41	1.000	.940	.046	.042	5024	2100
A 9Q27-112	1.041	1.55	1.125	1.059	.056	.050	6699	2600
A 9Q27-125	1.156	1.69	1.250	1.176	.056	.050	7460	3250
A 9Q27-156	1.446	2.10	1.562	1.468	.068	.062	11571	5200
A 9Q27-175	1.618	2.31	1.750	1.650	.068	.062	12992	6200
A 9Q27-187	1.735	2.44	1.875	1.769	.068	.062	13906	7000
A 9Q27-200	1.850	2.60	2.000	1.886	.068	.062	14819	8050
A 9Q27-212	1.964	2.78	2.125	2.003	.086	.078	19793	9150
A 9Q27-225	2.081	2.88	2.250	2.120	.086	.078	21011	10350
A 9Q27-237	2.197	3.06	2.375	2.239	.086	.078	22127	11400
A 9Q27-250	2.313	3.17	2.500	2.360	.086	.078	23345	12350
A 9Q27-275	2.543	3.48	2.750	2.602	.103	.093	30551	14400
A 9Q27-300	2.775	3.60	3.000	2.838	.103	.093	33394	17200

* Thrust Strength Factor of Safety: Rings = 4 Grooves = 2

Continued from the previous page



INTERNAL

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> MATERIAL:

Carbon Spring Steel (SAE 1065 - 1090), Oil-Dipped
Stainless Steel (PH 15-7 Mo)

> TENSILE STRENGTH:

45,000 psi

> SPECIFICATIONS:

A Tolerance:

.280 to .859 in. +.010/-0.005
.901 to 1.111 in. +.015/-0.010

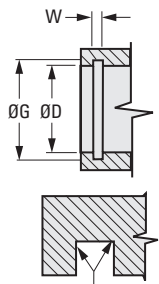
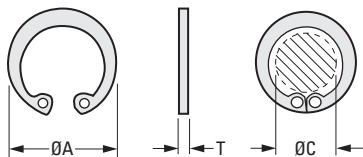
G Tolerance:

.268 to .030 in. ± .001
.397 to .796 in. ± .002
.825 to 1.066 in. ± .002

W Tolerance:

.018 in. +.002/-0.000
.029 to .046 in. +.003/-0.000

Carbon Spring Steel (SAE 1065 - 1090), Oil-Dipped - Priced Per 100 Pieces
Stainless Steel (PH 15-7 Mo) - Priced Per 10 Pieces



GROOVE DETAIL
.005 MAX.
BOTTOM RADIUS

INCH COMPONENT

Catalog Number	D Housing Dia.	A Free Dia.	C Ring Clear. Dia.	G Groove Dia.	W Groove Width	T Ring Thick. ± .002	Thrust Strength lbf	
							Ring	Groove
Carbon Spring Steel (SAE 1065 - 1090), Oil-Dipped								
A 9Q28-25	.250	.280	.11	.268	.018	.015	1280	320
A 9Q28-31	.312	.346	.17	.330	.018	.015	1600	395
A 9Q28-37	.375	.415	.20	.397	.029	.025	3500	580
A 9Q28-43	.438	.482	.23	.461	.029	.025	4100	740
A 9Q28-45	.453	.498	.25	.477	.029	.025	4200	765
A 9Q28-50	.500	.548	.26	.530	.039	.035	6500	1060
A 9Q28-51	.512	.560	.27	.542	.039	.035	6700	1085
A 9Q28-56	.562	.620	.28	.596	.039	.035	7400	1350
A 9Q28-62	.625	.694	.34	.665	.039	.035	8200	1760
A 9Q28-68	.688	.763	.40	.732	.039	.035	9000	2140
A 9Q28-75	.750	.831	.44	.796	.039	.035	9900	2400
A 9Q28-77	.777	.859	.47	.825	.046	.042	15000	2600
A 9Q28-81	.812	.901	.48	.862	.046	.042	16000	2800
A 9Q28-86	.866	.961	.53	.920	.046	.042	17000	3300
A 9Q28-87	.875	.971	.54	.931	.046	.042	17000	3400
A 9Q28-90	.901	1.000	.57	.959	.046	.042	17500	3600
A 9Q28-93	.938	1.041	.60	1.000	.046	.042	18000	4100
A 9Q28-100	1.000	1.111	.67	1.066	.046	.042	19000	4700
Stainless Steel (PH 15-7 Mo)								
A 9Y28-25	.250	.280	.11	.268	.018	.015	1280	320
A 9Y28-31	.312	.346	.17	.330	.018	.015	1600	395
A 9Y28-37	.375	.415	.20	.397	.029	.025	3500	580
A 9Y28-50	.500	.548	.26	.530	.039	.035	6500	1060
A 9Y28-62	.625	.694	.34	.665	.039	.035	8200	1760
A 9Y28-75	.750	.831	.44	.796	.039	.035	9900	2400
A 9Y28-87	.875	.971	.54	.931	.046	.042	17000	3400
A 9Y28-100	1.000	1.111	.67	1.066	.046	.042	19000	4700

EXTERNAL
SNAP-ON DESIGN

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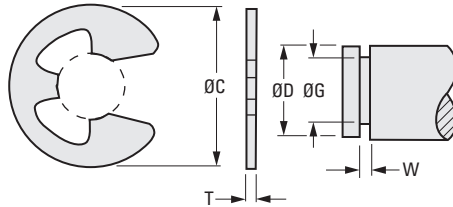


► **MATERIAL:**
Stainless Steel (PH 15-7 Mo)

► **TENSILE STRENGTH:**
225,000 psi

► **SPECIFICATIONS:**
G Tolerance:
.052 to .147 in. +.002/-0.000
.210 to .835 in. +.003/-0.000

W Tolerance:
.012 to .020 in. +.002/-0.000
.029 to .056 in. +.003/-0.000



INCH COMPONENT

Catalog Number	D Shaft Dia.		C Ring Clear. Dia.	G Groove Dia.	W Groove Width	T Ring Thick. ± .002	Thrust Strength lbf	
	Fraction	Decimal					Ring	Groove
Stainless Steel (PH 15-7 Mo)								
S73LW2-ER133-06	1/16	.062	.165	.052	.012	.010*	7	20
S73LW2-ER133-06A	1/16	.062	.200	.052	.023	.020	7	40
S73LW2-ER133-09	3/32	.094	.200	.074	.020	.015	45	20
S73LW2-ER133-12	1/8	.125	.240	.095	.020	.015	65	45
S73LW2-ER133-15	5/32	.156	.295	.116	.029	.025	175	75
S73LW2-ER133-18	3/16	.188	.350	.147	.029	.025	190	90
S73LW2-ER133-25	1/4	.250	.540	.210	.029	.025	255	115
S73LW2-ER133-31	5/16	.312	.520	.250	.029	.025	325	225
S73LW2-ER133-37	3/8	.375	.680	.303	.039	.035	690	315
S73LW2-ER133-43	7/16	.438	.710	.343	.039	.035	830	480
S73LW2-ER133-50	1/2	.500	.820	.396	.046	.042	1110	600
S73LW2-ER133-62	5/8	.625	.960	.485	.046	.042	1420	1050
S73LW2-ER133-75	3/4	.750	1.140	.580	.056	.050	2000	1500
S73LW2-ER133-87	7/8	.875	1.320	.675	.056	.050	2350	2050
Cold Rolled Steel								
S73LW2-ER133-98C	1	1.000	1.530	.835	.056	.050	2650	1900

* Thickness tolerance: ± .001.