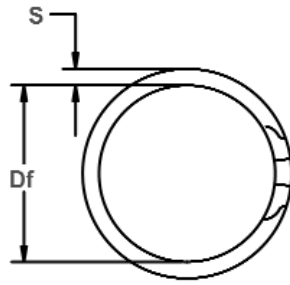


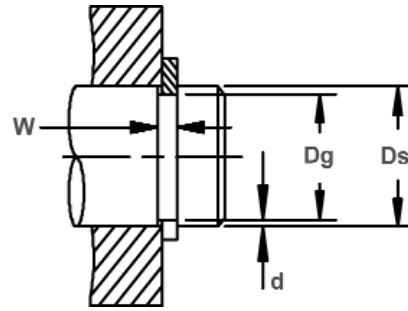
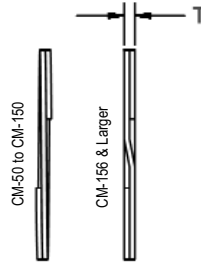
# CM Spiral Shaft Rings

## External, Medium Duty

These rings offer the greatest economy in price and size. They are able to handle approximately twice the thrust capacity of the CL series, and to be produced to military specifications if needed.

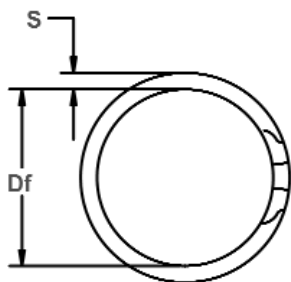


Free Diameter & Ring Measurements

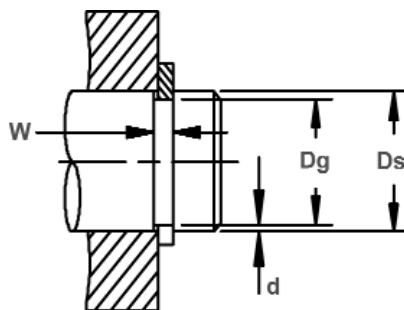
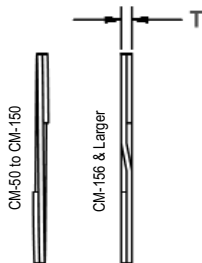


Shaft Diameter & Groove Dimensions

RING NO.	SHAFT DIAMETER	GROOVE SIZE					RING SIZE				THRUST LOAD (lbs.)			
		DIAMETER		WIDTH		DEPTH	FREE DIAMETER		THICKNESS		SECTION		RING Safety factor of 3	GROOVE Safety factor of 2
		(In.)	Dg	Tol.	W	Tol.	d	Df	Tol.	T	Tol.	S		
CM-50	.500	.474	+.002 -.002	.030	+.003 -.000	.013	.467	+.000 -.013	.025	+.002 -.002	.045	+.004 -.004	2000	460
CM-53	.531	.505		.030		.013	.498		.025		.045		2130	490
CM-55	.551	.525		.030		.013	.518		.025		.045		2210	510
CM-56	.562	.536		.030		.013	.529		.025		.045		2250	520
CM-59	.594	.569		.030		.013	.561		.025		.045		2380	550
CM-62	.625	.594		.030		.016	.585		.025		.055		2500	710
CM-65	.656	.625		.030		.016	.617		.025		.055		2630	740
CM-66	.669	.638		.030		.016	.629		.025		.055		2680	760
CM-68	.687	.656		.030		.016	.647		.025		.055		2750	780
CM-71	.718	.687		.030		.016	.679		.025		.055		2880	810
CM-75	.750	.719	.036	.016	.710	.031	.065	3360	850					
CM-78	.781	.750	.036	.016	.741	.031	.065	3500	880					
CM-81	.812	.781	.036	.016	.771	.031	.065	3640	920					
CM-84	.843	.812	.036	.016	.803	.031	.065	3780	950					
CM-87	.875	.838	.036	.019	.828	.031	.065	3920	1180					
CM-90	.906	.869	.036	.019	.860	.031	.065	4060	1220					
CM-93	.937	.900	.036	.019	.889	.031	.065	4200	1260					
CM-96	.968	.925	.042	.021	.916	.037	.075	5180	1440					
CM-98	.984	.941	.042	.021	.930	.037	.075	5260	1460					
CM-100	1.000	.957	.042	.021	.946	.037	.075	5350	1480					
CM-102	1.023	.980	.042	.021	.968	.037	.075	5470	1520					
CM-103	1.031	.988	.042	.021	.978	.037	.075	5510	1530					
CM-106	1.062	1.020	.042	.021	1.007	.037	.075	5680	1580					
CM-109	1.093	1.051	.042	.021	1.040	.037	.075	5840	1620					
CM-112	1.125	1.083	.042	.021	1.070	.037	.075	6020	1670					
CM-115	1.156	1.114	.042	.021	1.102	.037	.075	6180	1720					
CM-118	1.188	1.140	.048	.024	1.127	.043	.085	7380	2020					
CM-121	1.218	1.170	.048	.024	1.159	.043	.085	7570	2070					
CM-125	1.250	1.202	.048	.024	1.188	.043	.085	7770	2120					
CM-128	1.281	1.233	.048	.024	1.221	.043	.085	7960	2170					
CM-131	1.312	1.264	.048	.024	1.251	.043	.095	8150	2230					
CM-134	1.343	1.295	.048	.024	1.282	.043	.095	8350	2280					
CM-137	1.375	1.323	.048	.026	1.308	.043	.095	8540	2530					
CM-140	1.406	1.354	.048	.026	1.340	.043	.095	8740	2580					
CM-143	1.437	1.385	.048	.026	1.370	.043	.095	8930	2640					
CM-146	1.468	1.416	.048	.026	1.402	.043	.095	9120	2700					
CM-150	1.500	1.448	.048	.026	1.433	.043	.095	9320	2760					



Free Diameter & Ring Measurements



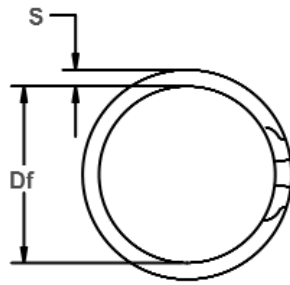
Shaft Diameter & Groove Dimensions

RING NO.	SHAFT DIAMETER	GROOVE SIZE					RING SIZE				THRUST LOAD (lbs.)			
		DIAMETER		WIDTH		DEPTH	FREE DIAMETER		THICKNESS		SECTION		RING Safety factor of 3	GROOVE Safety factor of 2
		(In.)	Dg	Tol.	W	Tol.	d	Df	Tol.	T	Tol.	S	Tol.	
CM-156	1.562	1.507		.056		.028	1.490		.049		.108		10100	3090
CM-157	1.575	1.520		.056		.028	1.503		.049		.108		10190	3120
CM-162	1.625	1.566		.056		.030	1.549		.049		.108		10510	3450
CM-168	1.687	1.628		.056		.030	1.610		.049		.118		10910	3580
CM-175	1.750	1.691	+.005 -.005	.056		.030	1.673		.049		.118		11310	3710
CM-177	1.771	1.708		.056		.032	1.690		.049		.118		11450	4010
CM-181	1.813	1.749		.056		.032	1.730	+.000 -.020	.049		.118		11720	4100
CM-187	1.875	1.808		.056		.034	1.789		.049		.128		12120	4510
CM-193	1.938	1.871		.056		.034	1.851		.049		.128		12530	4660
CM-196	1.969	1.902		.056		.034	1.882		.049		.128	+.004 -.004	12730	4730
CM-200	2.000	1.929		.056		.035	1.909		.049		.128		12930	4950
CM-206	2.062	1.992		.056		.035	1.971		.049		.128		13330	5100
CM-212	2.125	2.051		.056	+.004 -.000	.037	2.029		.049		.128		13740	5560
CM-215	2.156	2.082		.056		.037	2.060		.049		.138		13940	5640
CM-216	2.165	2.091		.056		.037	2.070		.049	+.003 -.003	.138		14000	5660
CM-218	2.188	2.113		.056		.037	2.092		.049		.138		14150	5720
CM-225	2.250	2.176		.056		.037	2.153		.049		.138		14550	5890
CM-231	2.312	2.234		.056		.039	2.211		.049		.138		14950	6370
CM-236	2.362	2.284		.056		.039	2.261	+.000 -.025	.049		.138		15270	6510
CM-237	2.375	2.297		.056		.039	2.273		.049		.138		15360	6550
CM-243	2.437	2.355		.056		.041	2.331		.049		.148		15760	7060
CM-250	2.500	2.418	+.006 -.006	.056		.041	2.394		.049		.148		16160	7250
CM-255	2.559	2.473		.056		.043	2.449		.049		.148		16550	7780
CM-256	2.562	2.476		.056		.043	2.452		.049		.148		16560	7790
CM-262	2.625	2.539		.056		.043	2.514		.049		.148		16970	7980
CM-268	2.688	2.597		.056		.045	2.572		.049		.158		17380	8550
CM-275	2.750	2.660		.056		.045	2.635		.049		.158		17780	8750
CM-281	2.813	2.722		.056		.045	2.696		.049		.168		18190	8950
CM-287	2.875	2.781		.056		.047	2.755		.049		.168		18590	9550
CM-293	2.937	2.843		.056		.047	2.817		.049		.168		18990	9760
CM-295	2.952	2.858		.056		.047	2.831	+.000 -.030	.049		.168		19090	9810
CM-300	3.000	2.904		.068		.048	2.877		.061		.168	+.005 -.005	24150	10180
CM-306	3.062	2.966		.068		.048	2.938	.061		.168	24650		10390	
CM-312	3.125	3.027		.068	+.005 -.000	.049	3.000		.061		.178		25150	10820
CM-314	3.149	3.051		.068		.049	3.023		.061		.178		25350	10910
CM-318	3.187	3.089		.068		.049	3.061		.061		.178		25650	11040
CM-325	3.250	3.150		.068		.050	3.121		.061		.178		26160	11490

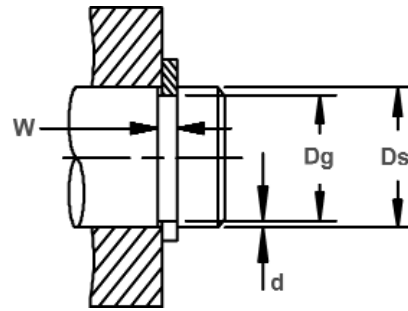
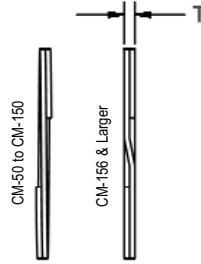
# CM Spiral Shaft Rings

## External, Medium Duty

These rings offer the greatest economy in price and size. They are able to handle approximately twice the thrust capacity of the CL series, and to be produced to military specifications if needed.

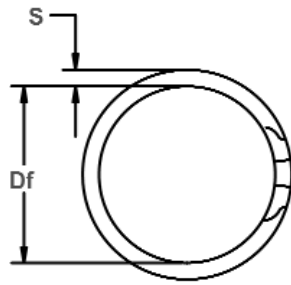


Free Diameter & Ring Measurements

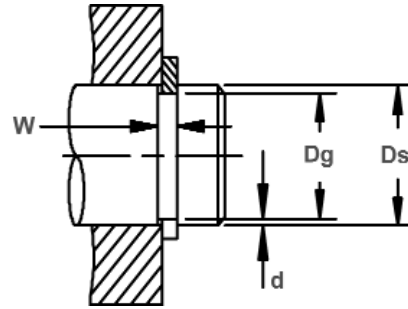
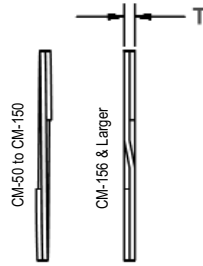


Shaft Diameter & Groove Dimensions

RING NO.	SHAFT DIAMETER	GROOVE SIZE					RING SIZE						THRUST LOAD (lbs.)		
		DIAMETER		WIDTH		DEPTH	FREE DIAMETER			THICKNESS		SECTION		RING Safety factor of 3	GROOVE Safety factor of 2
		Dg	Tol.	W	Tol.	d	Df	Tol.	T	Tol.	S	Tol.			
CM-331	3.312	3.208		.068		.052	3.180		.061		.188		26660	12170	
CM-334	3.343	3.239		.068		.052	3.210	+ .000	.061		.188		26910	12290	
CM-337	3.375	3.271		.068		.052	3.242	- .030	.061		.188		27170	12410	
CM-343	3.437	3.331		.068		.053	3.301		.061		.188		27660	12880	
CM-350	3.500	3.394		.068		.053	3.363		.061		.188		28170	13110	
CM-354	3.543	3.433		.068		.055	3.402		.061		.198		28520	13770	
CM-356	3.562	3.452		.068		.055	3.422		.061		.198		28670	13850	
CM-362	3.625	3.515		.068		.055	3.483		.061		.198		29180	14090	
CM-368	3.687	3.575		.068		.056	3.543		.061		.198		29680	14600	
CM-374	3.740	3.628		.068		.056	3.597		.061		.198		30100	14800	
CM-375	3.750	3.638		.068		.056	3.606		.061		.198		30180	14840	
CM-381	3.812	3.700		.068		.056	3.668		.061	+ .003	.198		30680	15090	
CM-387	3.875	3.757		.068		.059	3.724		.061	- .003	.208		31190	16160	
CM-393	3.938	3.820		.068		.059	3.784		.061		.208	+ .005	31700	16420	
CM-400	4.000	3.876	+ .006	.068	+ .005	.062	3.842		.061		.218	- .005	32200	17530	
CM-406	4.063	3.939	- .006	.068	- .000	.062	3.906		.061		.218		32700	17810	
CM-412	4.125	4.000		.068		.062	3.967		.061		.218		33200	18080	
CM-413	4.134	4.010		.068		.062	3.975		.061		.218		33270	18120	
CM-418	4.188	4.058		.068		.065	4.022	+ .000	.061		.218		33710	19240	
CM-425	4.250	4.120		.068		.065	4.084	- .040	.061		.228		34210	19530	
CM-431	4.312	4.182		.068		.065	4.147		.061		.228		34710	19810	
CM-433	4.331	4.200		.068		.065	4.164		.061		.228		34860	19900	
CM-437	4.375	4.245		.068		.065	4.208		.061		.228		35210	20100	
CM-443	4.437	4.307		.068		.065	4.271		.061		.228		35710	20390	
CM-450	4.500	4.364		.068		.068	4.326		.061		.238		36220	21630	
CM-456	4.562	4.422		.079		.070	4.384		.072		.250		43340	22570	
CM-462	4.625	4.485		.079		.070	4.447		.072		.250		43940	22890	
CM-468	4.687	4.547		.079		.070	4.508		.072		.250		44530	23190	
CM-472	4.724	4.584		.079		.070	4.546		.072		.250		44880	23370	
CM-475	4.750	4.610		.079		.070	4.571		.072	+ .004	.250		45130	23500	
CM-481	4.812	4.672		.079		.070	4.633		.072	- .004	.250		45720	23810	
CM-487	4.875	4.735		.079		.070	4.695		.072		.250		46310	24120	
CM-493	4.937	4.797		.079		.070	4.757		.072		.250		46900	24430	
CM-500	5.000	4.856		.079		.072	4.816		.072		.250		47500	25450	
CM-511	5.118	4.974		.079		.072	4.934		.072		.250		48620	26050	
CM-512	5.125	4.981		.079		.072	4.939		.072		.250		48690	26080	



Free Diameter & Ring Measurements



Shaft Diameter & Groove Dimensions

RING NO.	SHAFT DIAMETER	GROOVE SIZE					RING SIZE						THRUST LOAD (lbs.)		
		DIAMETER		WIDTH		DEPTH	FREE DIAMETER			THICKNESS		SECTION		RING Safety factor of 3	GROOVE Safety factor of 2
		(In.)	Dg	Tol.	W	Tol.	d	Df	Tol.	T	Tol.	S	Tol.		
CM-525	5.250	5.107		.079		.072	5.064		.072		.250		49880	26720	
CM-537	5.375	5.228		.079		.074	5.187		.072		.250		51060	28120	
CM-550	5.500	5.353		.079		.074	5.308		.072		.250		52250	28770	
CM-551	5.511	5.364	+ .007	.079	+ .005	.074	5.320		.072		.250		52360	28830	
CM-562	5.625	5.478	- .007	.079	- .005	.074	5.433	+ .000	.072		.250	- .005	53440	29420	
CM-575	5.750	5.597		.079		.077	5.550	- .050	.072		.250		54630	31300	
CM-587	5.875	5.722		.079		.077	5.674		.072		.250		55810	31980	
CM-590	5.905	5.752		.079		.077	5.705		.072		.250		56100	32140	
CM-600	6.000	5.847		.079		.077	5.798		.072		.250		57000	32660	
CM-612	6.125	5.953		.094		.086	5.903		.086		.312		69500	37230	
CM-625	6.250	6.078		.094		.086	6.026		.086		.312		70920	37990	
CM-629	6.299	6.127		.094		.086	6.076		.086		.312		71480	38290	
CM-637	6.375	6.203		.094		.086	6.152		.086		.312		72340	38750	
CM-650	6.500	6.328		.094		.086	6.274		.086		.312		73760	39510	
CM-662	6.625	6.443		.094		.091	6.390	+ .000	.086		.312		75180	42620	
CM-675	6.750	6.568		.094		.091	6.513	- .060	.086		.312		76600	43420	
CM-687	6.875	6.693		.094		.091	6.638		.086		.312		78010	44220	
CM-700	7.000	6.818		.094		.091	6.761		.086		.312		79430	45030	
CM-712	7.125	6.933		.094		.096	6.877		.086	+ .004	.312		80850	48350	
CM-725	7.250	7.058		.094		.096	6.999		.086	- .004	.312		82270	49200	
CM-737	7.375	7.183		.094		.096	7.125		.086		.312		83690	50050	
CM-750	7.500	7.308	+ .008	.094	+ .006	.096	7.250		.086		.312	+ .006	85110	50890	
CM-762	7.625	7.423	- .008	.094	- .006	.101	7.363		.086		.312	- .006	86520	54440	
CM-775	7.750	7.548		.094		.101	7.486		.086		.312		87940	55330	
CM-787	7.875	7.673		.094		.101	7.611		.086		.312		89360	56220	
CM-800	8.000	7.798		.094		.101	7.734		.086		.312		90780	57110	
CM-825	8.250	8.038		.094		.106	7.972		.086		.375		93620	61820	
CM-850	8.500	8.288		.094		.106	8.220	+ .000	.086		.375		96450	63690	
CM-875	8.750	8.528		.094		.111	8.459	- .070	.086		.375		99290	68650	
CM-900	9.000	8.778		.094		.111	8.707		.086		.375		102130	70620	
CM-925	9.250	9.018		.094		.116	8.945		.086		.375		104960	75850	
CM-950	9.500	9.268		.094		.116	9.194		.086		.375		107800	77900	
CM-975	9.750	9.508		.094		.121	9.432		.086		.375		110640	83390	
CM-1000	10.000	9.758		.094		.121	9.680		.086		.375		113470	85530	
CM-1025	10.250	9.998		.094		.126	9.918		.086		.375		116310	91290	
CM-1050	10.500	10.248		.094		.126	10.166		.086		.375		119150	93520	
CM-1075	10.750	10.488		.094		.131	10.405		.086		.375		121990	99540	
CM-1100	11.000	10.738		.094		.131	10.653		.086		.375		124820	101860	