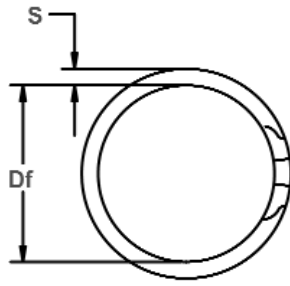


# MCM Spiral Shaft Rings

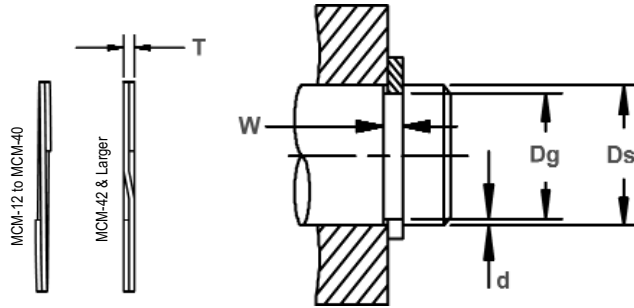
## External, Medium Duty, Metric

These rings offer the greatest economy in price and size.

They are able to handle approximately twice the thrust capacity of the MCL series.

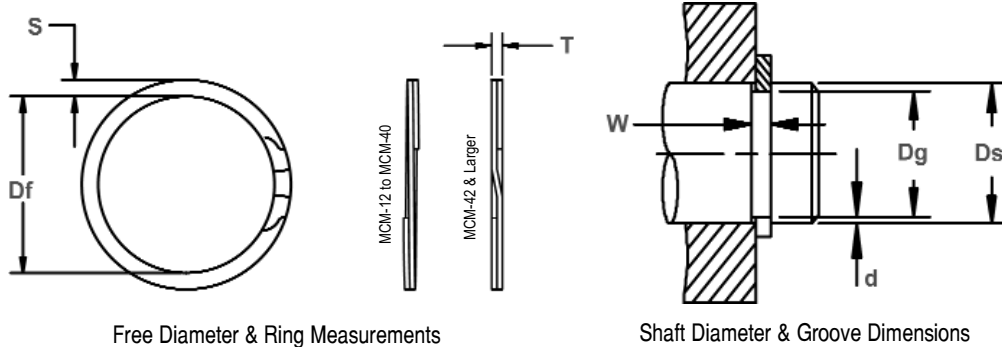


Free Diameter & Ring Measurements



Shaft Diameter & Groove Dimensions

RING NO.	SHAFT DIAMETER	GROOVE SIZE				RING SIZE						THRUST LOAD (N)	
		DIAMETER		WIDTH		FREE DIAMETER		THICKNESS		SECTION		RING Safety factor of 3	GROOVE Safety factor of 2
		(mm)	Dg	Tol.	W	Tol.	Df	Tol.	T	Tol.	S		
MCM-12	12	11.34	+ 0.10 -0.00	0.75	+ 0.08 -0.00	11.21	+ 0.00 -0.33	0.64	+0.05 -0.05	1.14	+0.08 -0.13	8484	2246
MCM-13	13	12.28		0.75		12.15		0.64		1.14		9191	2951
MCM-14	14	13.28		0.75		13.15		0.64		1.14		9898	3480
MCM-15	15	14.28		0.75		14.15		0.64		1.14		10605	3729
MCM-16	16	15.14		0.75		14.98		0.64		1.40		11312	4750
MCM-17	17	16.14		0.75		15.98		0.64		1.40		12091	5047
MCM-18	18	17.14		0.75		16.98		0.64		1.40		12726	5344
MCM-19	19	18.14		0.91		17.98		0.80		1.65		15145	5573
MCM-20	20	19.14		0.91		18.98		0.80		1.65		15942	5938
MCM-21	21	20.14		0.91		19.98		0.80		1.65		16739	6235
MCM-22	22	21.00	0.91	20.82	0.80	1.65	17536	7595					
MCM-23	23	22.00	0.91	21.82	0.80	1.65	18333	7941					
MCM-24	24	23.00	0.91	22.80	0.80	1.65	19131	8286					
MCM-25	25	23.84	+0.13 -0.00	1.07	+ 0.00 -0.38	23.64	+ 0.00 -0.50	0.94	+0.08 -0.08	1.90	+0.08 -0.13	23415	10012
MCM-26	26	24.84		1.07		24.61		0.94		1.90		24352	10412
MCM-27	27	25.84		1.07		25.61		0.94		1.90		25288	10813
MCM-28	28	26.84		1.07		26.61		0.94		1.90		26225	11213
MCM-29	29	27.84		1.07		27.61		0.94		1.90		27161	11614
MCM-30	30	28.68		1.22		28.45		1.10		2.16		32881	13671
MCM-32	32	30.68	1.22	30.43	1.10	2.16	35073	14583					
MCM-33	33	31.68	1.22	31.42	1.10	2.40	36169	15039					
MCM-34	34	32.68	1.22	32.43	1.10	2.40	37265	15494					
MCM-35	35	33.60	1.22	33.32	1.10	2.40	38361	16917					
MCM-36	36	34.60	1.22	34.32	1.10	2.40	39457	17400					
MCM-37	37	35.66	1.22	35.36	1.10	2.40	40553	17883					
MCM-38	38	36.60	1.22	36.32	1.10	2.40	41649	18367					
MCM-39	39	37.48	+ 0.25 -0.00	1.42	+0.10 -0.00	37.25	+ 0.00 -0.50	1.25	+0.08 -0.08	2.75	+0.08 -0.13	44350	20466
MCM-40	40	38.48		1.42		38.18		1.25		2.75		45487	20991
MCM-42	42	40.40		1.42		40.10		1.25		2.75		47761	23200
MCM-43	43	41.38		1.42		41.04		1.25		3.00		48899	24049
MCM-44	44	42.38		1.42		42.06		1.25		3.00		50036	24609
MCM-45	45	43.28		1.42		42.95		1.25		3.00		51173	26722
MCM-47	47	45.22		1.42		44.85		1.25		3.25		53447	29207
MCM-48	48	46.20		1.42		45.85		1.25		3.25		54584	29829
MCM-50	50	48.20		1.42		47.82		1.25		3.25		56859	31072
MCM-52	52	50.00		1.42		49.62		1.25		3.25		59133	35905
MCM-53	53	51.00	1.42	50.62	1.25	3.25	60270	36595					
MCM-54	54	52.00	1.42	51.62	1.25	3.25	61408	37286					
MCM-55	55	53.00	1.42	52.62	1.25	3.50	62545	37976					
MCM-56	56	54.00	+0.30 -0.00	1.42	+ 0.00 -0.63	53.62	+ 0.00 -0.63	1.25	+0.08 -0.08	3.50	+0.08 -0.13	63682	38667
MCM-58	58	55.86		1.42		55.43		1.25		3.50		65956	42851
MCM-59	59	56.86		1.42		56.43		1.25		3.50		67093	43590
MCM-60	60	57.86		1.42		57.43		1.25		3.50		68231	44329
MCM-61	61	58.76		1.42		58.36		1.25		3.50		69368	47174
MCM-62	62	59.76		1.42		59.30		1.25		3.76		70505	47947



Free Diameter & Ring Measurements

Shaft Diameter & Groove Dimensions

RING NO.	SHAFT DIAMETER	GROOVE SIZE				RING SIZE						THRUST LOAD (N)	
		DIAMETER		WIDTH		FREE DIAMETER		THICKNESS		SECTION		RING Safety factor of 3	GROOVE Safety factor of 2
		(mm)	Dg	Tol.	W	Tol.	Df	Tol.	T	Tol.	S		
MCM-63	63	60.76		1.42		60.30		1.25		3.76		71642	48720
MCM-64	64	61.76		1.42		61.25		1.25		3.76		72779	49494
MCM-65	65	62.66		1.42		62.20	+0.00	1.25		3.76		73916	50267
MCM-66	66	63.64		1.42		63.16	-0.63	1.25		3.76	+0.08	75054	53775
MCM-67	67	64.56		1.42	+0.10	64.16		1.25		3.76	-0.13	76191	56440
MCM-68	68	65.56		1.42	-0.00	65.08		1.25		4.00		77328	57282
MCM-69	69	66.56		1.42		66.06		1.25		4.00		78465	58125
MCM-70	70	67.56		1.42		67.08		1.25		4.00		79602	58967
MCM-71	71	68.56		1.42		68.04		1.25	+0.08	4.00		80740	59809
MCM-72	72	69.50		1.42		69.00	+0.00	1.25	-0.08	4.27		81877	62143
MCM-75	75	72.46	+0.30	1.42		71.93	-0.76	1.25		4.27		85288	65768
MCM-78	78	75.40	-0.00	1.73		74.84		1.55		4.27		109988	70015
MCM-80	80	77.36		1.73		76.80		1.55		4.52		112808	72915
MCM-82	82	79.30		1.73		78.72		1.55		4.52		115628	76436
MCM-85	85	82.20		1.73		81.62		1.55		4.77		119858	82167
MCM-88	88	85.16		1.73		84.53		1.55		4.77		124089	86282
MCM-90	90	87.06		1.73		86.43		1.55		5.03		126909	91350
MCM-95	95	92.00		1.73		91.37		1.55		5.03		133959	98393
MCM-100	100	96.86		1.73		96.10	+0.00	1.55		5.28		141010	108405
MCM-105	105	101.70		1.73	+0.13	100.94	-1.00	1.55		5.53	+0.10	148060	119626
MCM-110	110	106.54		1.73	-0.00	105.75		1.55		5.80	-0.15	155111	131398
MCM-115	115	111.40		1.73		110.59		1.55		6.05		162161	142929
MCM-120	120	116.30		2.00		115.49		1.83		6.35		199779	153286
MCM-125	125	121.30		2.00		120.44		1.83		6.35		208103	159673
MCM-130	130	126.20		2.00		125.34		1.83		6.35		216427	170548
MCM-135	135	131.10		2.00		130.20		1.83		6.35		224752	181769
MCM-140	140	136.08	+0.35	2.00		135.14	+0.00	1.83		6.35		233076	189468
MCM-145	145	141.00	-0.00	2.00		140.00	-1.30	1.83		6.35		241400	200293
MCM-150	150	146.00		2.00		145.00		1.83		6.35		249724	207144
MCM-155	155	150.40		2.40		149.33		2.18		7.92		307401	246156
MCM-160	160	155.40		2.40		154.31		2.18		7.92		317318	254096
MCM-165	165	160.40		2.40		159.23	+0.00	2.18		7.92		327234	262037
MCM-170	170	165.20		2.40		164.00	-1.52	2.18	+0.10	7.92		337150	281716
MCM-175	175	170.20		2.40		169.00		2.18	-0.10	7.92		347066	290001
MCM-180	180	175.00		2.40		173.78		2.18		7.92		356982	310716
MCM-185	185	180.00		2.40		178.70		2.18		7.92		366899	319347
MCM-190	190	185.00	+0.40	2.40	+0.15	183.70		2.18		7.92	+0.10	376815	327978
MCM-195	195	189.80	-0.00	2.40	-0.00	188.43		2.18		7.92	-0.20	386731	350073
MCM-200	200	194.80		2.40		193.43		2.18		7.92		396647	359049
MCM-210	210	204.40		2.40		202.93		2.18		9.52		416479	406002
MCM-220	220	214.20		2.40		212.65	+0.00	2.18		9.52		436312	440526
MCM-230	230	224.20		2.40		222.60	-1.78	2.18		9.52		456144	460550
MCM-240	240	234.00		2.40		232.32		2.18		9.52		475976	497145
MCM-250	250	243.60		2.40		241.83		2.18		9.52		495809	552383
MCM-260	260	253.40		2.40		251.57		2.18		9.52		515641	592431
MCM-270	270	263.20		2.40		261.30		2.18		9.52		535474	633806
MCM-280	280	273.00		2.40		271.04		2.18		9.52		555306	676670