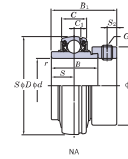
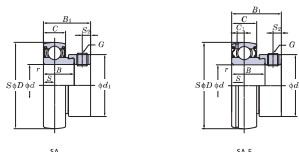


Ball Bearing Inserts

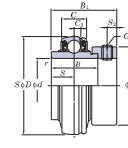
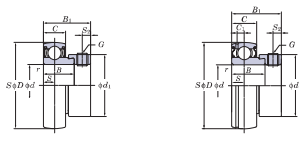
SA, SA-F, NA
Cylindrical bore
(with eccentric locking collar)
d 12 ~ (30) mm



Shaft Dia mm inch	Dimensions								Basic Load Ratings			Factor	Bearing No.	Dimensions								Set Screw Brg. Bore		Mass kg			
	d	D	B	B ₁	C	r (min.)	C _r	C _{0r}	f _s	C ₁	S			S ₂	d ₁	mm	inch	mm	inch	mm	inch						
12	—	40	1.575	19	0.764	28.5	1.122	12	0.472	0.6	0.024	9.55	4.80	13.2	SA201	—	—	6	0.236	4.8	0.189	28.6	1.126	M6x0.75	—	0.13	
		40	1.575	19.1	0.752	28.6	1.126	13	0.512	0.6	0.024	9.55	4.80	13.2	SA201F	3.4	0.134	6.5	0.256	4.8	0.189	28.6	1.126	M6x0.75	—	0.13	
		47	1.850	34.2	1.346	43.7	1.720	16	0.630	1	0.039	12.8	6.65	13.2	NA201	4	0.157	17.1	0.673	4.8	0.189	33.3	1.311	M6x0.75	—	0.29	
—	1/2	40	1.575	19	0.784	28.5	1.122	12	0.472	0.6	0.024	9.55	4.80	13.2	SA201-8	—	—	6	0.236	4.8	0.189	28.6	1.126	—	1/2-28UNF	—	0.13
		40	1.575	19.1	0.752	28.6	1.126	13	0.512	0.6	0.024	9.55	4.80	13.2	SA201-8F	3.4	0.134	6.5	0.256	4.8	0.189	28.6	1.126	—	1/2-28UNF	—	0.13
		47	1.850	34.2	1.346	43.7	1.720	16	0.630	1	0.039	12.8	6.65	13.2	NA201-8	4	0.157	17.1	0.673	4.8	0.189	33.3	1.311	M6x0.75	—	0.29	
—	—	40	1.575	19	0.784	28.5	1.122	12	0.472	0.6	0.024	9.55	4.80	13.2	SA202	—	—	6	0.236	4.8	0.189	28.6	1.126	M6x0.75	—	0.13	
		40	1.575	19.1	0.752	28.6	1.126	13	0.512	0.6	0.024	9.55	4.80	13.2	SA202F	3.4	0.134	6.5	0.256	4.8	0.189	28.6	1.126	M6x0.75	—	0.13	
		47	1.850	34.2	1.346	43.7	1.720	16	0.630	1	0.039	12.8	6.65	13.2	NA202	4	0.157	17.1	0.673	4.8	0.189	33.3	1.311	M6x0.75	—	0.27	
—	3/8	40	1.575	19	0.784	28.5	1.122	12	0.472	0.6	0.024	9.55	4.80	13.2	SA202-10	—	—	6	0.236	4.8	0.189	28.6	1.126	—	1/2-28UNF	—	0.13
		47	1.850	34.2	1.346	43.7	1.720	16	0.630	1	0.039	12.8	6.65	13.2	NA202-10	4	0.157	17.1	0.673	4.8	0.189	33.3	1.311	M6x0.75	—	0.26	
		40	1.575	19	0.784	28.5	1.122	12	0.472	0.6	0.024	9.55	4.80	13.2	SA203	—	—	6	0.236	4.8	0.189	28.6	1.126	M6x0.75	—	0.13	
—	—	40	1.575	19.1	0.752	28.6	1.126	13	0.512	0.6	0.024	9.55	4.80	13.2	SA203F	3.4	0.134	6.5	0.256	4.8	0.189	28.6	1.126	M6x0.75	—	0.13	
		47	1.850	34.2	1.346	43.7	1.720	16	0.630	1	0.039	12.8	6.65	13.2	NA203	4	0.157	17.1	0.673	4.8	0.189	33.3	1.311	M6x0.75	—	0.25	
		47	1.850	20	0.787	29.5	1.161	14	0.551	1	0.039	12.8	6.65	13.2	SA204-12	—	—	7	0.276	4.8	0.189	33.3	1.311	—	1/2-28UNF	—	0.15
—	1/4	47	1.850	21.5	0.846	31	1.220	15	0.591	1	0.039	12.8	6.65	13.2	NA204	3.7	0.146	7.5	0.295	4.8	0.189	33.3	1.311	—	1/2-28UNF	—	0.19
		47	1.850	34.2	1.346	43.7	1.720	16	0.630	1	0.039	12.8	6.65	13.2	SA204-12F	4	0.157	17.1	0.673	4.8	0.189	33.3	1.311	—	1/2-28UNF	—	0.23
		47	1.850	34.2	1.346	43.7	1.720	16	0.630	1	0.039	12.8	6.65	13.2	NA204-12	4	0.157	17.1	0.673	4.8	0.189	33.3	1.311	—	1/2-28UNF	—	0.23
—	—	47	1.850	20	0.787	29.5	1.161	14	0.551	1	0.039	12.8	6.65	13.2	SA204	—	—	7	0.276	4.8	0.189	33.3	1.311	M6x0.75	—	0.15	
		47	1.850	21.5	0.846	31	1.220	15	0.591	1	0.039	12.8	6.65	13.2	SA204F	3.7	0.146	7.5	0.295	4.8	0.189	33.3	1.311	M6x0.75	—	0.19	
		47	1.850	34.2	1.346	43.7	1.720	16	0.630	1	0.039	12.8	6.65	13.2	NA204	4	0.157	17.1	0.673	4.8	0.189	33.3	1.311	M6x0.75	—	0.22	
—	3/8	52	2.047	21	0.827	30.5	1.201	15	0.591	1	0.039	14.0	7.85	13.9	SA205-14	—	—	7.5	0.295	4.8	0.189	38.1	1.500	—	1/2-28UNF	—	0.22
		52	2.047	34.9	1.374	44.4	1.748	17	0.669	1	0.039	14.0	7.85	13.9	NA205-14	5	0.197	17.5	0.689	4.8	0.189	38.1	1.500	—	1/2-28UNF	—	0.27
		52	2.047	21	0.827	30.5	1.201	15	0.591	1	0.039	14.0	7.85	13.9	SA205-15	—	—	7.5	0.295	4.8	0.189	38.1	1.500	—	1/2-28UNF	—	0.22
—	1/2	52	2.047	21.5	0.846	31	1.220	15	0.591	1	0.039	14.0	7.85	13.9	SA205-15F	3.7	0.146	7.5	0.295	4.8	0.189	38.1	1.500	—	1/2-28UNF	—	0.23
		52	2.047	34.9	1.374	44.4	1.748	17	0.669	1	0.039	14.0	7.85	13.9	NA205-15	5	0.197	17.5	0.689	4.8	0.189	38.1	1.500	—	1/2-28UNF	—	0.29
		52	2.047	21	0.827	30.5	1.201	15	0.591	1	0.039	14.0	7.85	13.9	SA205	—	—	7.5	0.295	4.8	0.189	38.1	1.500	M6x0.75	—	0.22	
—	—	52	2.047	21.5	0.846	31	1.220	15	0.591	1	0.039	14.0	7.85	13.9	SA205F	3.7	0.146	7.5	0.295	4.8	0.189	38.1	1.500	M6x0.75	—	0.23	
		52	2.047	34.9	1.374	44.4	1.748	17	0.669	1	0.039	14.0	7.85	13.9	NA205	5	0.197	17.5	0.689	4.8	0.189	38.1	1.500	M6x0.75	—	0.25	
		52	2.047	21	0.827	30.5	1.201	15	0.591	1	0.039	14.0	7.85	13.9	SA205-16	—	—	7.5	0.295	4.8	0.189	38.1	1.500	—	1/2-28UNF	—	0.22
—	1	52	2.047	21.5	0.846	31	1.220	15	0.591	1	0.039	14.0	7.85	13.9	SA205-16F	3.7	0.146	7.5	0.295	4.8	0.189	38.1	1.500	—	1/2-28UNF	—	0.23
		52	2.047	34.9	1.374	44.4	1.748	17	0.669	1	0.039	14.0	7.85	13.9	NA205-16	5	0.197	17.5	0.689	4.8	0.189	38.1	1.500	—	1/2-28UNF	—	0.25
		52	2.047	21	0.827	30.5	1.201	15	0.591	1	0.039	14.0	7.85	13.9	SA206-18	—	—	8	0.315	6	0.236	44.5	1.752	—	1/2-24UNF	—	0.3
—	1 1/8	62	2.441	22	0.866	33.9	1.335	16	0.630	1	0.039	19.5	11.3	13.9	SA206-18	4.7	0.185	9	0.354	6	0.236	44.5	1.752	—	1/2-24UNF	—	0.34
		62	2.441	36.5	1.437	48.4	1.906	19	0.748	1	0.043	25.7	15.4	13.9	NA206-18	5	0.197	18.3	0.720	6	0.236	44.5	1.752	—	1/2-24UNF	—	0.43
		62	2.441	22	0.866	33.9	1.335	16	0.630	1	0.039	19.5	11.3	13.9	SA206	—	—	8	0.315	6	0.236	44.5	1.752	M8x1	—	0.3	
—	—	62	2.441	23.8	0.937	35.7	1.406	18	0.709	1	0.039	19.5	11.3	13.9	SA206-18F	4.7	0.185	9	0.354	6	0.236	44.5	1.752	—	1/2-24UNF	—	0.34
		62	2.441	36.5	1.437	48.4	1.906	19	0.748	1	0.043	25.7	15.4	13.9	NA206-18	5	0.197	18.3	0.720	6	0.236	44.5	1.752	—	1/2-24UNF	—	0.43
		62	2.441	22	0.866	33.9	1.335	16	0.630	1	0.039	19.5	11.3	13.9	SA206F	4.7	0.185	9	0.354	6	0.236	44.5	1.752	M8x1	—	0.34	
—	30	62	2.441	36.5	1.437	48.4	1.906	19	0.748	1	0.043	25.7	15.4	13.9	NA206	5	0.197	18.3	0.720	6	0.236	44.5	1.752	M8x1	—	0.41	
		62	2.441	22	0.866	33.9	1.335	16	0.630	1	0.039	19.5	11.3	13.9	SA206-19	—	—	8	0.315	6	0.236	44.5	1.752	—	1/2-24UNF	—	0.3
		62	2.441	23.8	0.937	35.7	1.406	18	0.709	1	0.039	19.5	11.3	13.9	SA206-19F	4.7	0.185	9	0.354	6	0.236	44.5	1.752	—	1/2-24UNF	—	0.34
—	1 1/4	62	2.441	36.5	1.437	48.4	1.906	19	0.748	1	0.043	25.7	15.4	13.9	NA206-19	5	0.197	18.3	0.720	6	0.236	44.5	1.752	—	1/2-24UNF	—	0.38
		72	2.835	25	0.906	36.5	1.437	17	0.669	1.1	0.043	25.7	15.4	13.9	SA206-20	—	—	8.5	0.335	6.8	0.268	55.6	2.189	—	1/2-24UNF	—	0.5
		72	2.835	25.4	1.000	38.9	1.531	19	0.																		

Ball Bearing Inserts

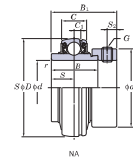
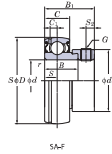
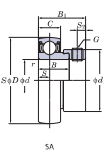
SA, SA-F, NA
Cylindrical bore
(with eccentric locking collar)
d (30) ~ 60 mm



Shaft Dia mm inch	Dimensions										Basic Load Ratings kN		Factor f_s	Bearing No.	Dimensions					Set Screw Brg. Bore		Mass kg				
	d	D	B	B_1	C	r (min.)	C_1	C_0	S	S_2	d_1	mm			inch	mm	inch	mm	inch							
—	1 1/8	72	2.835	23	0.906	36.5	1.437	17	0.669	1.1	0.043	25.7	15.4	13.9	SA207-22	5.7	0.224	9.5	0.335	6.8	0.268	55.6	2.189	—	1/2-24UNF	0.5
		72	2.835	25.4	1.000	38.9	1.531	19	0.748	1.1	0.043	25.7	15.4	13.9	SA207-22F	5.7	0.224	9.5	0.335	6.8	0.268	55.6	2.189	—	1/2-24UNF	0.57
		72	2.835	37.6	1.480	51.1	2.012	20	0.787	1.1	0.043	25.7	15.4	13.9	NA207-22	5.5	0.217	18.8	0.740	6.8	0.268	55.6	2.189	—	1/2-24UNF	0.61
35	—	72	2.835	23	0.906	36.5	1.437	17	0.669	1.1	0.043	25.7	15.4	13.9	SA207-27	—	—	8.5	0.335	6.8	0.268	55.6	2.189	MBx1	—	0.5
		72	2.835	25.4	1.000	38.9	1.531	19	0.748	1.1	0.043	25.7	15.4	13.9	SA207F	5.7	0.224	9.5	0.335	6.8	0.268	55.6	2.189	MBx1	—	0.57
		72	2.835	37.6	1.480	51.1	2.012	20	0.787	1.1	0.043	25.7	15.4	13.9	NA207	5.5	0.217	18.8	0.740	6.8	0.268	55.6	2.189	MBx1	—	0.61
—	1 1/16	72	2.835	23	0.906	36.5	1.437	17	0.669	1.1	0.043	25.7	15.4	13.9	SA207-23	—	—	8.5	0.335	6.8	0.268	55.6	2.189	—	1/2-24UNF	0.5
		72	2.835	25.4	1.000	38.9	1.531	19	0.748	1.1	0.043	25.7	15.4	13.9	SA207-23F	5.7	0.224	9.5	0.335	6.8	0.268	55.6	2.189	—	1/2-24UNF	0.57
		72	2.835	37.6	1.480	51.1	2.012	20	0.787	1.1	0.043	25.7	15.4	13.9	NA207-23	5.5	0.217	18.8	0.740	6.8	0.268	55.6	2.189	—	1/2-24UNF	0.58
—	1 1/2	80	3.150	38.1	1.500	51.6	2.031	26	1.024	1.5	0.059	33.4	19.3	13.2	NA307-23	7.5	0.295	18.3	0.720	6.8	0.268	55.5	2.185	—	1/2-24UNF	0.81
		80	3.150	27	1.063	40.5	1.595	18	0.709	1.1	0.043	29.1	17.8	14.0	SA208-24	—	—	9	0.354	6.8	0.268	60.3	2.374	—	1/2-24UNF	0.67
		80	3.150	30.2	1.189	43.7	1.720	22	0.866	1.1	0.043	29.1	17.8	14.0	SA208-24F	6.4	0.252	11	0.433	6.8	0.268	60.3	2.374	—	1/2-24UNF	0.75
—	1 1/4	80	3.150	42.8	1.685	56.3	2.217	21	0.827	1.1	0.043	29.1	17.8	14.0	NA208-24	6	0.236	21.4	0.843	6.8	0.268	60.3	2.374	—	1/2-24UNF	0.83
		80	3.543	41.3	1.626	57.1	2.248	28	1.102	1.5	0.059	40.7	24.0	13.2	NA208-24	8	0.315	19.8	0.780	8	0.315	63.5	2.500	—	3/8-24UNF	1.19
		80	3.150	27	1.063	40.5	1.595	18	0.709	1.1	0.043	29.1	17.8	14.0	SA208-25	—	—	9	0.354	6.8	0.268	60.3	2.374	—	1/2-24UNF	0.67
—	1 3/16	80	3.150	30.2	1.189	43.7	1.720	22	0.866	1.1	0.043	29.1	17.8	14.0	SA208-25F	6.4	0.252	11	0.433	6.8	0.268	60.3	2.374	—	1/2-24UNF	0.75
		80	3.150	42.8	1.685	56.3	2.217	21	0.827	1.1	0.043	29.1	17.8	14.0	NA208-25	6	0.236	21.4	0.843	6.8	0.268	60.3	2.374	—	1/2-24UNF	0.79
		80	3.150	27	1.063	40.5	1.595	18	0.709	1.1	0.043	29.1	17.8	14.0	SA208	—	—	9	0.354	6.8	0.268	60.3	2.374	MBx1	—	0.67
40	—	80	3.150	30.2	1.189	43.7	1.720	22	0.866	1.1	0.043	29.1	17.8	14.0	SA208F	6.4	0.252	11	0.433	6.8	0.268	60.3	2.374	MBx1	—	0.75
		80	3.150	42.8	1.685	56.3	2.217	21	0.827	1.1	0.043	29.1	17.8	14.0	NA208	6	0.236	21.4	0.843	6.8	0.268	60.3	2.374	MBx1	—	0.78
		85	3.346	30.2	1.189	43.7	1.720	22	0.866	1.1	0.043	34.1	21.3	14.0	SA209-26F	6	0.236	11	0.433	6.8	0.268	63.5	2.500	—	1/2-24UNF	0.82
—	1 1/8	85	3.346	42.8	1.685	56.3	2.217	22	0.866	1.1	0.043	34.1	21.3	14.0	NA209-26	6	0.236	21.4	0.843	6.8	0.268	63.5	2.500	—	1/2-24UNF	0.96
		85	3.346	30.2	1.189	43.7	1.720	22	0.866	1.1	0.043	34.1	21.3	14.0	SA209-27F	6	0.236	11	0.433	6.8	0.268	63.5	2.500	—	1/2-24UNF	0.82
		85	3.346	42.8	1.685	56.3	2.217	22	0.866	1.1	0.043	34.1	21.3	14.0	NA209-27	6	0.236	21.4	0.843	6.8	0.268	63.5	2.500	—	1/2-24UNF	0.91
—	1 1/4	100	3.937	42.9	1.689	58.7	2.311	30	1.181	1.5	0.059	48.9	29.5	13.3	NA309-27	8.5	0.335	19.8	0.780	8	0.315	69.8	2.746	—	1/2-24UNF	1.47
		85	3.346	30.2	1.189	43.7	1.720	22	0.866	1.1	0.043	34.1	21.3	14.0	SA209-28F	6	0.236	11	0.433	6.8	0.268	63.5	2.500	—	1/2-24UNF	0.82
		85	3.346	42.8	1.685	56.3	2.217	22	0.866	1.1	0.043	34.1	21.3	14.0	NA209-28	6	0.236	21.4	0.843	6.8	0.268	63.5	2.500	—	1/2-24UNF	0.87
45	—	85	3.346	30.2	1.189	43.7	1.720	22	0.866	1.1	0.043	34.1	21.3	14.0	SA209F	6	0.236	11	0.433	6.8	0.268	63.5	2.500	MBx1	—	0.82
		85	3.346	42.8	1.685	56.3	2.217	22	0.866	1.1	0.043	34.1	21.3	14.0	NA209	6	0.236	21.4	0.843	6.8	0.268	63.5	2.500	MBx1	—	0.85
		90	3.543	30.2	1.189	43.7	1.720	22	0.866	1.1	0.043	35.1	23.3	14.4	SA210-30F	6.6	0.260	11	0.433	6.8	0.268	69.9	2.752	—	1/2-24UNF	0.85
—	1 1/8	90	3.543	49.2	1.937	62.7	2.469	24	0.945	1.1	0.043	35.1	23.3	14.4	NA210-30	6	0.236	24.6	0.969	6.8	0.268	69.9	2.752	—	1/2-24UNF	1.08
		90	3.543	30.2	1.189	43.7	1.720	22	0.866	1.1	0.043	35.1	23.3	14.4	SA210-31F	6.6	0.260	11	0.433	6.8	0.268	69.9	2.752	—	1/2-24UNF	0.85
		90	3.543	49.2	1.937	62.7	2.469	24	0.945	1.1	0.043	35.1	23.3	14.4	NA210-31	6	0.236	24.6	0.969	6.8	0.268	69.9	2.752	—	1/2-24UNF	1.04
—	1 1/4	110	4.331	49.2	1.937	66.6	2.622	32	1.260	2	0.079	62.0	38.3	13.2	NA310-31	9	0.354	24.6	0.969	8.7	0.343	76.2	3.000	—	1/2-24UNF	1.95
		90	3.543	30.2	1.189	43.7	1.720	22	0.866	1.1	0.043	35.1	23.3	14.4	SA210F	6.6	0.260	11	0.433	6.8	0.268	69.9	2.752	MBx1	—	0.85
		90	3.543	49.2	1.937	62.7	2.469	24	0.945	1.1	0.043	35.1	23.3	14.4	NA210	6	0.236	24.6	0.969	6.8	0.268	69.9	2.752	MBx1	—	1.01
—	2	90	3.543	49.2	1.937	62.7	2.469	24	0.945	1.1	0.043	35.1	23.3	14.4	NA210-32	6	0.236	24.6	0.969	6.8	0.268	69.9	2.752	—	1/2-24UNF	0.99
		100	3.937	32.4	1.276	48.4	1.906	24	0.945	1.5	0.059	43.4	29.4	14.4	SA211-32F	7	0.276	12	0.472	8	0.315	76.2	3.000	—	1/2-24UNF	1.2
		100	3.937	32.4	1.276	48.4	1.906	24	0.945	1.5	0.059	43.4	29.4	14.4	NA211-32	7	0.276	12	0.472	8	0.315	76.2	3.000	—	1/2-24UNF	1.58
55	—	100	3.937	32.4	1.276	48.4	1.906	24	0.945	1.5	0.059	43.4	29.4	14.4	SA211-34F	7	0.276	12	0.472	8	0.315	76.2	3.000	—	1/2-24UNF	1.2
		100	3.937	55.5	2.185	71.4	2.811	25	0.984	1.5	0.059	43.4	29.4	14.4	NA211-34	7	0.276	27.8	1.094	8	0.315	76.2	3.000	—	1/2-24UNF	1.49
		100	3.937	32.4	1.276	48.4	1.906	24	0.945	1.5	0.059	43.4	29.4	14.4	SA211	7	0.276	12	0.472	8	0.315	76.2	3.000	M10x1.25	—	1.2
—	2 1/8	100	3.937	55.5	2.185	71.4	2.811	25	0.984	1.5	0.059	43.4	29.4	14.4	NA211	7	0.276	27.8	1.094	8	0.315	76.2	3.000	M10x1.25	—	1.39
		100	3.937	32.4	1.276	48.4	1.906	24	0.945	1.5	0.059	43.4	29.4	14.4	SA211-35F	7	0.276	12	0.472	8	0.315	76.2	3.000	—	1/2-24UNF	1.2
		100	3.937	55.5	2.185																					

Ball Bearing Inserts

SA, SA-F, NA
Cylindrical bore
(with eccentric locking collar)
d 65 ~ 75 mm



Shaft Dia mm inch	Dimensions										Basic Load Ratings kN		Factor f_s	Bearing No.	Dimensions								Set Screw Brg. Bore		Mass kg	
	d	D		B		B_1		C		r (min.)		C_r			C_o	C_1	S		S_2		d_1		mm	inch		
65	2 1/5	120	4.724	68.2	2.685	85.7	3.374	28	1.102	1.5	0.059	57.2	40.1	14.4	NA213-40	7.5	0.295	34.1	1.343	8.5	0.335	92	3.622	-	1/8-24UNF	2.51
		120	4.724	68.2	2.685	85.7	3.374	28	1.102	1.5	0.059	57.2	40.1	14.4	NA213	7.5	0.295	34.1	1.343	8.5	0.335	92	3.622	-	M10x1.25	2.45
70	2 3/4	125	4.921	68.2	2.685	85.7	3.374	30	1.181	1.5	0.059	62.2	44.1	14.5	NA214-44	9	0.354	34.1	1.343	8.5	0.335	97	3.819	-	1/8-24UNF	2.94
		125	4.921	68.2	2.685	85.7	3.374	30	1.181	1.5	0.059	62.2	44.1	14.5	NA214	9	0.354	34.1	1.343	8.5	0.335	97	3.819	-	M10x1.25	2.92
	2 7/16	150	5.905	68.3	2.689	92.1	3.626	40	1.575	2.1	0.083	104	68.2	13.2	NA314-43	12.5	0.492	34.1	1.343	11.9	0.469	101.6	4.000	-	1/2-20UNF	4.7
75	3	130	5.118	74.6	2.937	92.1	3.626	32	1.260	1.5	0.059	67.4	48.3	14.5	NA215	9	0.354	37.3	1.469	8.5	0.335	102	4.016	-	M10x1.25	2.74
		130	5.118	74.6	2.937	92.1	3.626	32	1.260	1.5	0.059	67.4	48.3	14.5	NA215-48	9	0.354	37.3	1.469	8.5	0.335	102	4.016	-	1/8-24UNF	2.72
	2 15/16	160	6.299	74.6	2.937	100	3.937	42	1.654	2.1	0.083	113	77.2	13.2	NA315-47	14.5	0.571	37.3	1.469	12.7	0.500	112.7	4.437	-	1/2-18UNF	5.8