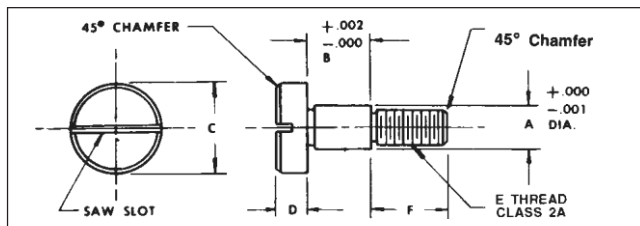


SLOTTED HEAD SHOULDER SCREWS

303 & Hardened 416 Stainless Steel



Material: 303 Stainless Steel — 43XX
416 Stainless Steel — 45XX (Hardness 26-32 RC)

A	B	C	D	E	F	303 P / N	416 P / N
1/8 .1245	1/8- .1255 3/16- .1880 1/4- .2505 5/16- .3130 3/8- .3755	1/4	1/8	# 4-40	5/32	4310 4311 4312 4313 4314	4510 4511 4512 4513 4514
5/32 .1557	1/8- .1255 3/16- .1880 1/4- .2505 5/16- .3130 3/8- .3755	9/32	1/8	# 6-32	3/16	4361 4362 4363 4364 4365	4561 4562 4563 4564 4565
3/16 .1870	1/8- .1255 3/16- .1880 1/4- .2505 5/16- .3130 3/8- .3755 1/2- .5005 5/8- .6255 3/4- .7505 1 - 1.0005 1-1/4- 1.2505 1-1/2- 1.5005	5/16	5/32	# 8-32	3/16	4315 4316 4317 4318 4319 4320 4321 4322 4323 4324 4325	4515 4516 4517 4518 4519 4520 4521 4522 4523 4524 4525

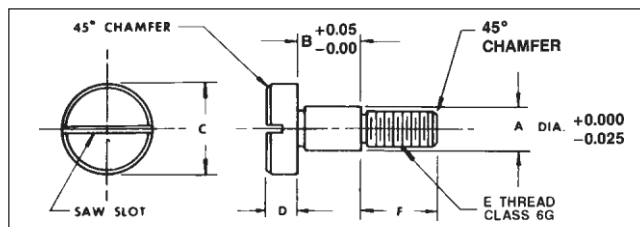
A	B	C	D	E	F	303 P / N	416 P / N
1/4 .2495	1/8- .1255 3/16- .1880 1/4- .2505 5/16- .3130 3/8- .3755 1/2- .5005 5/8- .6255 3/4- .7505 1 - 1.0005 1-1/4- 1.2505 1-1/2- 1.5005	3/8	3/16	# 10-32	1/4	4326 4327 4328 4329 4330 4331 4332 4333 4334 4335 4336	4526 4527 4528 4529 4530 4531 4532 4533 4534 4535 4536
5/16 .3120	1/4- .2505 5/16- .3130 3/8- .3755 1/2- .5005 5/8- .6255 3/4- .7505	1/2	7/32	1/4-20	7/16	4337 4338 4339 4340 4341 4342	4537 4538 4539 4540 4541 4542
3/8 .3745	5/16- .3130 3/8- .3755 1/2- .5005 5/8- .6255	1/2	7/32	1/4-20	7/16	4343 4344 4345 4346	4543 4544 4545 4546
3/8 .3745	5/16- .3130 3/8- .3755 1/2- .5005 5/8- .6255	9/16	1/4	5/16-18	1/2	4347 4348 4349 4350	4547 4548 4549 4550
1/2 .4995	1/2- .5005 5/8- .6255 3/4- .7505 1 - 1.0005	3/4	5/16	3/8-16	5/8	4351 4352 4353 4354	4551 4552 4553 4554

Shoulder Screw Kits	Qty.	303 P / N	416 P / N
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 1/8" and thread of # 4-40	50	Y34K	Y37K
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 3/16" and thread of # 8-32	50	Y35K	Y38K
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 1/4" and thread of # 10-32	50	Y36K	Y39K

METRIC SLOTTED HEAD SHOULDER SCREWS

303 & Hardened 416 Stainless Steel

All Dimensions in Millimeters



Material: 303 Stainless Steel — MSB1-XX
416 Stainless Steel — MSB3-XX (Hardness 26-32 RC)

A	B	C	D	E	F	303 P / N	416 P / N
3.987 (4)	4.013 (4) 5.013 (5) 6.013 (6) 8.013 (8) 10.013 (10)	6	3	M3 x 0.5	4	MSB1-1 MSB1-2 MSB1-3 MSB1-4 MSB1-5	MSB3-1 MSB3-2 MSB3-3 MSB3-4 MSB3-5
4.987 (5)	4.013 (4) 5.013 (5) 6.013 (6) 8.013 (8) 10.013 (10) 12.013 (12) 14.013 (14) 16.013 (16) 20.013 (20) 25.013 (25) 30.013 (30)	8	4	M4 x 0.7	5	MSB1-6 MSB1-7 MSB1-8 MSB1-9 MSB1-10 MSB1-11 MSB1-12 MSB1-13 MSB1-14 MSB1-15 MSB1-16	MSB3-6 MSB3-7 MSB3-8 MSB3-9 MSB3-10 MSB3-11 MSB3-12 MSB3-13 MSB3-14 MSB3-15 MSB3-16
5.987 (6)	4.013 (4) 5.013 (5) 6.013 (6) 8.013 (8)	10	5	M5 x 0.8	6	MSB1-17 MSB1-18 MSB1-19 MSB1-20	MSB3-17 MSB3-18 MSB3-19 MSB3-20

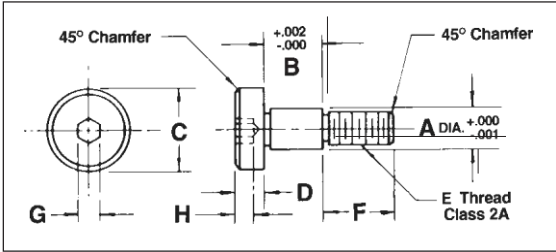
A	B	C	D	E	F	303 P / N	416 P / N
5.987 (6)	10.013 (10) 12.013 (12) 14.013 (14) 16.013 (16) 20.013 (20) 25.013 (25) 30.013 (30)	10	5	M5 x 0.8	6	MSB1-21 MSB1-22 MSB1-23 MSB1-24 MSB1-25 MSB1-26 MSB1-27	MSB3-21 MSB3-22 MSB3-23 MSB3-24 MSB3-25 MSB3-26 MSB3-27
7.987 (8)	6.013 (6) 8.013 (8) 10.013 (10) 12.013 (12) 16.013 (16) 20.013 (20)	12	6	M6 x 1	11	MSB1-28 MSB1-29 MSB1-30 MSB1-31 MSB1-32 MSB1-33	MSB3-28 MSB3-29 MSB3-30 MSB3-31 MSB3-32 MSB3-33
9.987 (10)	8.013 (8) 10.013 (10) 12.013 (12) 16.013 (16)	12	6	M6 x 1	11	MSB1-34 MSB1-35 MSB1-36 MSB1-37	MSB3-34 MSB3-35 MSB3-36 MSB3-37
9.987 (10)	8.013 (8) 10.013 (10) 12.013 (12) 16.013 (16)	14	7	M8 x 1.25	12	MSB1-38 MSB1-39 MSB1-40 MSB1-41	MSB3-38 MSB3-39 MSB3-40 MSB3-41
11.987 (12)	12.013 (12) 16.013 (16) 20.013 (20) 25.013 (25)	20	8	M10 x 1.5	16	MSB1-42 MSB1-43 MSB1-44 MSB1-45	MSB3-42 MSB3-43 MSB3-44 MSB3-45

Shoulder Screw Kits	Qty.	303 P / N	416 P / N
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 4mm and thread of M3 x 0.5	50	MAK19	MAK22
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 5mm and thread of M4 x 0.7	50	MAK20	MAK23
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 6mm and thread of M5 x 0.8	50	MAK21	MAK24

(continued)

SOCKET HEAD SHOULDER SCREWS

303 & Hardened 416 Stainless Steel — Inch



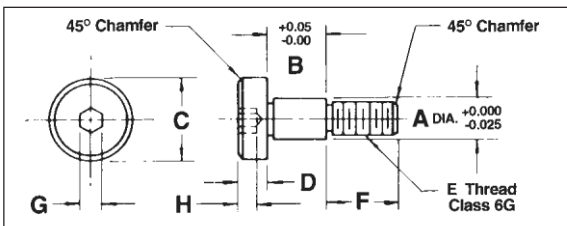
Material: 303 Stainless Steel — 44XX
416 Stainless Steel — 46XX (Hardness 26-32 RC)

A	B	C	D	E	F	G	H (min.)	303 P / N	416 P / N
1/8 .1245	1/8- .1255	1/4	1/8	# 4-40	5/32	5/64	1/16	4410	4610
	3/16- .1880							4411	4611
	1/4- .2505							4412	4612
	5/16- .3130							4413	4613
5/32 .1557	3/8- .3755	9/32	1/8	# 6-32	3/16	3/32	5/64	4414	4614
	1/2- .5005							4461	4661
	3/4- .6255							4462	4662
	1- 1.0005							4463	4663
3/16 .1870	1-1/4- 1.2505	5/16	5/32	# 8-32	3/16	3/32	5/64	4464	4664
	1-1/2- 1.5005							4465	4665
	1/8- .1255							4415	4615
	3/16- .1880							4416	4616

A	B	C	D	E	F	G	H (min.)	303 P / N	416 P / N
1/4 .2495	1/8- .1255	3/8	3/16	# 10-32	1/4	1/8	3/32	4426	4626
	3/16- .1880							4427	4627
	1/4- .2505							4428	4628
	5/16- .3130							4429	4629
	3/8- .3755							4430	4630
	1/2- .5005							4431	4631
	5/8- .6255							4432	4632
	3/4- .7505							4433	4633
	1- 1.0005							4434	4634
	1-1/4- 1.2505							4435	4635
5/16 .3120	1-1/2- 1.5005	1/2	7/32	1/4-20	7/16	5/32	1/8	4436	4636
	1/4- .2505							4437	4637
	5/16- .3130							4438	4638
	3/8- .3755							4439	4639
	1/2- .5005							4440	4640
	5/8- .6255							4441	4641
3/8 .3745	3/4- .7505	1/2	7/32	1/4-20	7/16	5/32	1/8	4442	4642
	1/2- .5005							4443	4643
	5/8- .6255							4444	4644
	1- 1.0005							4445	4645
3/8 .3745	1-1/4- 1.2505	9/16	1/4	5/16-18	1/2	3/16	5/32	4446	4646
	1-1/2- 1.5005							4447	4647
	1/2- .5005							4448	4648
	5/8- .6255							4449	4649
1/2 .4995	1- 1.0005	3/4	5/16	3/8-16	5/8	1/4	3/16	4450	4650
	1-1/4- 1.2505							4451	4651
	1-1/2- 1.5005							4452	4652
	1- 1.0005							4453	4653

Shoulder Screw Kits	Qty.	303 P / N	416 P / N
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 1/8" and thread of # 4-40	50	Y34K	Y37K
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 3/16" and thread of # 8-32	50	Y35K	Y38K
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 1/4" and thread of # 10-32	50	Y36K	Y39K

303 & Hardened 416 Stainless Steel — Metric



Material: 303 Stainless Steel — MSB2-XX
416 Stainless Steel — MSB4-XX (Hardness 26-32 RC)

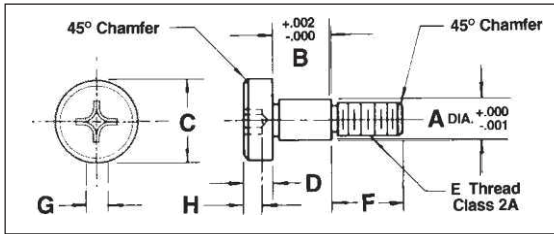
A	B	C	D	E	F	G	H (min.)	303 P / N	416 P / N
3.987 (4)	4.013 (4)	6	3	M3 x 0.5	4	2	1.6	MSB2-1	MSB4-1
	5.013 (5)							MSB2-2	MSB4-2
	6.013 (6)							MSB2-3	MSB4-3
	8.013 (8)							MSB2-4	MSB4-4
	10.013 (10)							MSB2-5	MSB4-5
4.987 (5)	4.013 (4)	8	4	M4 x 0.7	5	2.5	2	MSB2-6	MSB4-6
	5.013 (5)							MSB2-7	MSB4-7
	6.013 (6)							MSB2-8	MSB4-8
	8.013 (8)							MSB2-9	MSB4-9
	10.013 (10)							MSB2-10	MSB4-10
	12.013 (12)							MSB2-11	MSB4-11
	14.013 (14)							MSB2-12	MSB4-12
	16.013 (16)							MSB2-13	MSB4-13
	20.013 (20)							MSB2-14	MSB4-14
	25.013 (25)							MSB2-15	MSB4-15
5.987 (6)	30.013 (30)							MSB2-16	MSB4-16
	4.013 (4)	10	5	M5 x 0.8	6	3	2.4	MSB2-17	MSB4-17
	5.013 (5)							MSB2-18	MSB4-18
	6.013 (6)							MSB2-19	MSB4-19
	8.013 (8)							MSB2-20	MSB4-20

A	B	C	D	E	F	G	H (min.)	303 P / N	416 P / N
5.987 (6)	10.013 (10)	10	5	M5 x 0.8	6	3	2.4	MSB2-21	MSB4-21
	12.013 (12)							MSB2-22	MSB4-22
	14.013 (14)							MSB2-23	MSB4-23
	16.013 (16)							MSB2-24	MSB4-24
	20.013 (20)							MSB2-25	MSB4-25
	25.013 (25)							MSB2-26	MSB4-26
	30.013 (30)							MSB2-27	MSB4-27
7.987 (8)	6.013 (6)	12	6	M6 x 1	11	4	3.2	MSB2-28	MSB4-28
	8.013 (8)							MSB2-29	MSB4-29
	10.013 (10)							MSB2-30	MSB4-30
	12.013 (12)							MSB2-31	MSB4-31
	16.013 (16)							MSB2-32	MSB4-32
	20.013 (20)							MSB2-33	MSB4-33
	25.013 (25)							MSB2-34	MSB4-34
9.987 (10)	10.013 (10)	12	6	M6 x 1	11	4	3.2	MSB2-35	MSB4-35
	12.013 (12)							MSB2-36	MSB4-36
	16.013 (16)							MSB2-37	MSB4-37
	20.013 (20)							MSB2-38	MSB4-38
9.987 (10)	10.013 (10)	14	7	M8 x 1.25	12	5	4	MSB2-39	MSB4-39
	12.013 (12)							MSB2-40	MSB4-40
	16.013 (16)							MSB2-41	MSB4-41
	20.013 (20)							MSB2-42	MSB4-42
11.987 (12)	12.013 (12)	20	8	M10 x 1.5	16	6	4.8	MSB2-43	MSB4-43
	16.013 (16)							MSB2-44	MSB4-44
	25.013 (25)							MSB2-45	MSB4-45

Shoulder Screw Kits	Qty.	303 P / N	416 P / N
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 4mm and thread of M3 x 0.5	50	MAK19	MAK22
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 5mm and thread of M4 x 0.7	50	MAK20	MAK23
Shoulder Screws — Stainless Steel — Slotted and Socket Head. Assorted Lengths for shoulder dia. of 6mm and thread of M5 x 0.8	50	MAK21	MAK24

PHILLIPS HEAD SHOULDER SCREWS

303 & Hardened 416 Stainless Steel — Inch



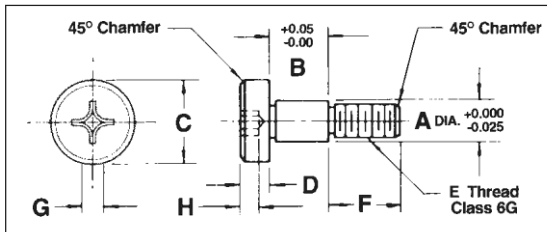
Material: 303 Stainless Steel — 47XX

416 Stainless Steel — 48XX (Hardness 26-32 RC)

A	B	C	D	E	F	H (min.)	303 P/N	416 P/N	*Drive Size
1/8 .1245	1/8- .1255	1/4	1/8	# 4-40	5/32	1/16	4710	4810	1
	3/16- .1880						4711	4811	
	1/4- .2505						4712	4812	
	5/16- .3130						4713	4813	
	3/8- .3755						4714	4814	
3/16 .1870	1/8- .1255	5/16	5/32	# 8-32	3/16	5/64	4715	4815	2
	3/16- .1880						4716	4816	
	1/4- .2505						4717	4817	
	5/16- .3130						4718	4818	
	3/8- .3755						4719	4819	
	1/2- .5005						4720	4820	
	5/8- .6255						4721	4821	
	3/4- .7505						4722	4822	
	1- 1.0005						4723	4823	
	1-1/4- 1.2505						4724	4824	
	1-1/2- 1.5005						4725	4825	

A	B	C	D	E	F	H (min.)	303 P/N	416 P/N	*Drive Size
1/4 .2495	1/8- .1255	3/8	3/16	# 10-32	1/4	3/32	4726	4826	2
	3/16- .1880						4727	4827	
	1/4- .2505						4728	4828	
	5/16- .3130						4729	4829	
	3/8- .3755						4730	4830	
	1/2- .5005						4731	4831	
	5/8- .6255						4732	4832	
	3/4- .7505						4733	4833	
	1- 1.0005						4734	4834	
	1-1/4- 1.2505						4735	4835	
	1-1/2- 1.5005						4736	4836	
5/16 .3120	1/4- .2505	1/2	7/32	1/4-20	7/16	1/8	4737	4837	3
	5/16- .3130						4738	4838	
	3/8- .3755						4739	4839	
	1/2- .5005						4740	4840	
	5/8- .6255						4741	4841	
3/8 .3745	5/16- .3130	1/2	7/32	1/4-20	7/16	1/8	4742	4842	3
	3/8- .3755						4743	4843	
	1/2- .5005						4744	4844	
	5/8- .6255						4745	4845	
3/8 .3745	5/16- .3130	9/16	1/4	5/16-18	1/2	5/32	4746	4846	3
	3/8- .3755						4747	4847	
	1/2- .5005						4748	4848	
	5/8- .6255						4749	4849	
1/2 .4995	5/16- .3130	3/4	5/16	3/8-16	5/8	3/16	4750	4850	4
	3/8- .3755						4751	4851	
	1/2- .5005						4752	4852	
	3/4- .7505						4753	4853	
	1- 1.0005						4754	4854	

303 & Hardened 416 Stainless Steel — Metric



Material: 303 Stainless Steel — MSB7-XX

416 Stainless Steel — MSB8-XX (Hardness 26-32 RC)

A	B	C	D	E	F	H (min.)	303 P/N	416 P/N	*Drive Size
3.987 (4)	4.013 (4)	6	3	M3 x 0.5	4	1.6	MSB7-1	MSB8-1	1
	5.013 (5)						MSB7-2	MSB8-2	
	6.013 (6)						MSB7-3	MSB8-3	
	8.013 (8)						MSB7-4	MSB8-4	
	10.013 (10)						MSB7-5	MSB8-5	
4.987 (5)	4.013 (4)	8	4	M4 x 0.7	5	2	MSB7-6	MSB8-6	2
	5.013 (5)						MSB7-7	MSB8-7	
	6.013 (6)						MSB7-8	MSB8-8	
	8.013 (8)						MSB7-9	MSB8-9	
	10.013 (10)						MSB7-10	MSB8-10	
	12.013 (12)						MSB7-11	MSB8-11	
	14.013 (14)						MSB7-12	MSB8-12	
	16.013 (16)						MSB7-13	MSB8-13	
	20.013 (20)						MSB7-14	MSB8-14	
	25.013 (25)						MSB7-15	MSB8-15	
	30.013 (30)						MSB7-16	MSB8-16	
5.987 (6)	4.013 (4)	10	5	M5 x 0.8	6	2.4	MSB7-17	MSB8-17	2
	5.013 (5)						MSB7-18	MSB8-18	
	6.013 (6)						MSB7-19	MSB8-19	
	8.013 (8)						MSB7-20	MSB8-20	

A	B	C	D	E	F	H (min.)	303 P/N	416 P/N	*Drive Size
5.987 (6)	10.013 (10)	10	5	M5 x 0.8	6	2.4	MSB7-21	MSB8-21	2
	12.013 (12)						MSB7-22	MSB8-22	
	14.013 (14)						MSB7-23	MSB8-23	
	16.013 (16)						MSB7-24	MSB8-24	
	20.013 (20)						MSB7-25	MSB8-25	
	25.013 (25)						MSB7-26	MSB8-26	
	30.013 (30)						MSB7-27	MSB8-27	
7.987 (8)	6.013 (6)	12	6	M6 x 1	11	3.2	MSB7-28	MSB8-28	3
	8.013 (8)						MSB7-29	MSB8-29	
	10.013 (10)						MSB7-30	MSB8-30	
	12.013 (12)						MSB7-31	MSB8-31	
	16.013 (16)						MSB7-32	MSB8-32	
	20.013 (20)						MSB7-33	MSB8-33	
9.987 (10)	8.013 (8)	12	6	M6 x 1	11	3.2	MSB7-34	MSB8-34	3
	10.013 (10)						MSB7-35	MSB8-35	
	12.013 (12)						MSB7-36	MSB8-36	
	16.013 (16)						MSB7-37	MSB8-37	
9.987 (10)	8.013 (8)	14	7	M8 x 1.2	12	4	MSB7-38	MSB8-38	4
	10.013 (10)						MSB7-39	MSB8-39	
	12.013 (12)						MSB7-40	MSB8-40	
	16.013 (16)						MSB7-41	MSB8-41	
	20.013 (20)						MSB7-42	MSB8-42	
11.987 (12)	12.013 (12)	20	8	M10 x 1.5	16	4.8	MSB7-43	MSB8-43	4
	16.013 (16)						MSB7-44	MSB8-44	
	20.013 (20)						MSB7-45	MSB8-45	
	25.013 (25)								

"SILVER-GRIP" SET SCREWS

Inch and Metric

How It Works: The "Silver-Grip" Inset

This diagram shows how the principle works. Note the pellet of silver alloy inset into the nose of the gear. The silver is just soft enough so that it adjusts, as you tighten the set screw, to mate with the exact contours of the opposing surface. The silver and shaft are in complete contact with each other over the total surface of the point of the screw. No wonder that no other set screw has greater holding power than the "Silver-Grip."

Never Mars The Opposing Surface

No matter how much torque you apply to the socket head, the "Silver-Grip" set screw will not scratch, mar or deform the opposing surface. When you remove the set screw, the surface will be as smooth as new!

Unscrews Easily

When it's time to re-set, the "Silver-Grip" unscrews without creating any problems.

Use It Over And Over

And you can reset the "Silver-Grip" over and over again, with the same perfect results you enjoy the first time you use it. The "Silver-Grip" is ideally suited — it's a must for any situation where a set screw must be periodically re-set or removed.



*Nominal Screw length
excludes silver tip

300 Series Stainless Steel.
Class 3A Threads

Screw Size	L *	Part No.
# 2-56	1/8	CS-51
# 4-40	1/8 1/4	CS-52 CS-53
# 6-32	1/8 1/4	CS-54 CS-55
# 8-32	3/16 3/8	CS-56 CS-57
#10-32	3/16 3/8	CS-59 CS-60
1/4 -20	1/4 3/8	CS-61 CS-62
5/16-18	1/2 3/4	CS-64 CS-65
3/8 -16	1/2 1	CS-66 CS-67

"SILVER-GRIP" KITS

Description of Contents	Number of Parts	Part No.
"Silver-Grip" Set Screws-Stainless Steel. Hex Head. Assorted Sizes from #4-40 to #8-32.	75	Y20K
"Silver-Grip" Set Screws-Stainless Steel. Hex Head. Assorted Sizes from #8-32 to 1/4-20.	75	Y21K
"Silver-Grip" Set Screws-Stainless Steel. Hex Head. Assorted Sizes from 1/4-20 to 3/8-16.	75	Y22K

METRIC "SILVER-GRIP" KITS

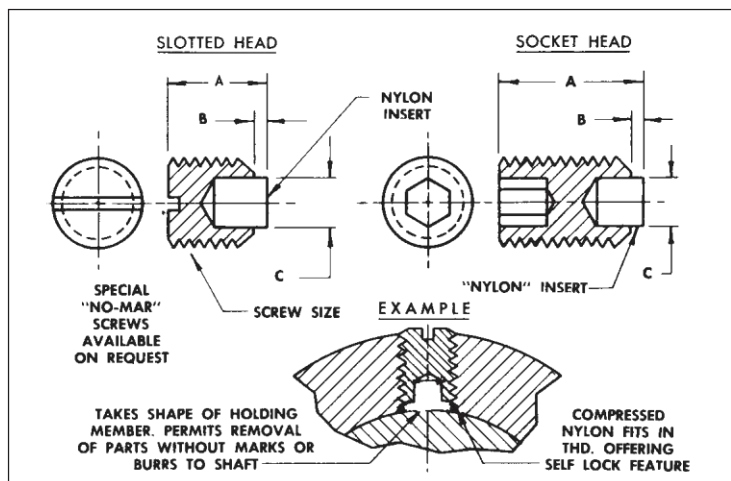
Description of Contents	Number of Parts	Part No.
"Silver-Grip" Set Screws-Socket Hexagon Type, stainless steel. Assorted lengths in sizes M2 x 0.4 and M3 x 0.5	75	MAK15
"Silver-Grip" Set Screws-Socket, Hexagon Type, stainless steel. Assorted lengths in sizes M4 x 0.7 and M5 x 0.8.	75	MAK16
"Silver-Grip" Set Screws-Socket, Hexagon Type, stainless steel. Assorted lengths in sizes M6 x 1 to M10 x 1.5.	75	MAK17

Dimensions Below Are In Millimeters.

Screw Size	L *	Part No.
M2 x 0.4	3 4 5 6	MSS3-1 MSS3-2 MSS3-3 MSS3-4
M3 x 0.5	3 4 5 6	MSS3-5 MSS3-6 MSS3-7 MSS3-8
M4 x 0.7	4 6 10 14	MSS3-9 MSS3-10 MSS3-11 MSS3-12
M5 x 0.8	6 10 14 20	MSS3-13 MSS3-14 MSS3-15 MSS3-16
M6 x 1	6 10 16 25	MSS3-17 MSS3-18 MSS3-19 MSS3-20
M10 x 1.5	12 20 30	MSS3-21 MSS3-22 MSS3-23

"NO-MAR" SET SCREWS

Inch and Metric



Material: Screw — Stainless Steel
Insert — Nylon

Sold in Increments of 10 Pieces.

Features:

- "No-Mar" Set Screws are self-locking as expanding nylon insert compresses against shaft and into thread of holding member
- Parts may be assembled or dis-assembled numerous times without damage to the shaft
- "No-Mar" Set Screws afford secure full force contact regardless of shape of the shaft
- "No-Mar" Set Screws will not scratch, mar or deform the opposing surface

SOCKET HEAD — Class 3A

Screw Size	A	B	C	Part No.
# 2-56	5/32 9/32	1/32	1/32	CS-8 CS-24
# 4-40	5/32 9/32 13/32	1/32	1/16	CS-9 CS-25 CS-26
# 6-32	5/32 9/32 17/32	1/32	1/16	CS-10 CS-15 CS-27
# 8-32	15/64 27/64 43/64	3/64	3/32	CS-11 CS-16 CS-28
#10-24	15/64 27/64	3/64	3/32	CS-12 CS-17
#10-32	15/64 27/64 43/64	3/64	3/32	CS-13 CS-18 CS-29
1/4-20	5/16 7/16 13/16 1- 1/16	1/16	1/8	CS-14 CS-19 CS-30 CS-31
1/4-28	7/16	1/16	1/8	CS-20
5/16-18	19/32 27/32 1- 3/32	3/32	3/16	CS-21 CS-32 CS-33
3/8-16	19/32 27/32 1- 3/32	3/32	3/16	CS-22 CS-34 CS-35
1/2-13	3/4 1- 1/8	1/8	1/4	CS-23 CS-36

SLOTTED HEAD — Class 2A

Screw Size	A	B	C	Part No.
# 2-56	5/32	1/32	1/32	CS-1
# 4-40	5/32	1/32	1/16	CS-2
# 6-32	5/32	1/32	1/16	CS-3
# 8-32	15/64	3/64	3/32	CS-4
#10-24	15/64	3/64	3/32	CS-5
#10-32	15/64	3/64	3/32	CS-6
1/4-20	15/64	3/64	3/32	CS-7

SOCKET HEAD — Class 6G

Dimensions Below Are In Millimeters.

Screw Size	A	B	C	Part No.
M2 x 0.4	3.8 4.8 5.8 6.8	0.8	0.8	MSS2-1 MSS2-2 MSS2-3 MSS2-4
M3 x 0.5	3.8 4.8 5.8 6.8	0.8	1.6	MSS2-5 MSS2-6 MSS2-7 MSS2-8
M4 x 0.7	5.2 7.2 11.2 15.2	1.2	2.4	MSS2-9 MSS2-10 MSS2-11 MSS2-12
M5 x 0.8	7.2 11.2 15.2 21.2	1.2	2.4	MSS2-13 MSS2-14 MSS2-15 MSS2-16
M6 x 1	7.6 11.6 17.6 26.6	1.6	3.2	MSS2-17 MSS2-18 MSS2-19 MSS2-20
M10 x 1.5	14.4 22.4 32.4	2.4	4.8	MSS2-21 MSS2-22 MSS2-23

"NO-MAR" KITS

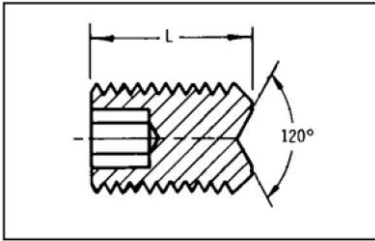
Description of Contents	Number of Parts	Part No.
"No-Mar" Set Screws-Stainless Steel Hex Head. Assorted Sizes from #2-56 to #10-32	100	Y18K
"No-Mar" Set Screws-Stainless Steel Hex Head. Assorted Sizes from #10-32 to 1/2-13	75	Y19K

METRIC "NO-MAR" KITS

Description of Contents	Number of Parts	Part No.
"No-Mar" Set Screws-Socket, Hexagon Type, stainless steel. Assorted sizes from M2 x 0.4 to M4 x 0.7.	100	MAK13
"No-Mar" Set Screws-Socket, Hexagon Type, stainless steel. Assorted sizes from M5 x 0.8 to M10 x 1.5	75	MAK14

SETSCREWS – CUP POINT

Conforming To DIN 916



Material: 300 Series Stainless Steel

SOCKET HEAD

Screw Size	L	Part No.
# 0-80	11B 3116	Y1M Y11-2
# 2-56	118 3116 114	Y11-3 Y11-4 Y11-5
# 4-40	118 3/16 114	Y11-6 Y11-7 Y11-8
# 6-32	118 114 3/8 112	Y11-9 Y11-10 Y11-11 Y11-12
# 8-32	114 3/8 112 5/8	Y11-13 Y11-14 Y11-15 Y1M 6
#10-32	1/4 1/2 3/4	Y11-17 Y1M8 Y11-19
114-20	112 314	Y11-22 Y11-23

SLDm DHEAD

Screw Size	L	Part No.
#0-80	11B	C2-15
#2-56	1/8	BE-1-A
#6-32	118	BE-3-A

SOCKET HEAD

Dimensions Below Are In Millimeters

Screw Size	L	Part No.
M1.6 x 0.35	3 4 5	MSS4-1 MSS4-2 MSS4-3
M2 x 0.4	3 4 5 6	MSS4-4 MSS4-5 MSS4-6 MSS4-7
M3 x 0.5	3 4 5 6	MSS4-8 MSS4-9 MSS4-10 MSS4-11
M4 x 0.7	4 6 10 14	MSS4-12 MSS4-13 MSS4-14 MSS4-15
MS x 0.8	6 10 14 20	MSS4-16 MSS4-17 MSS4-18 MSS4-19
M6 x 1	6 10 16 25	MSS4-20 MSS4-21 MSS4-22 MSS4-23
M10 x 1.5	12 20 30	MSS4-24 MSS4-25 MSS4-26

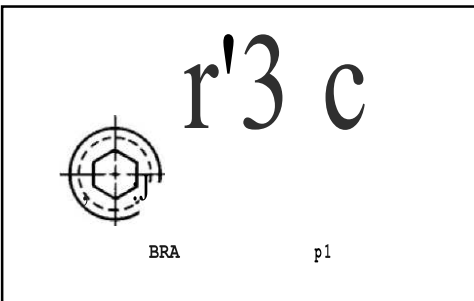
SET SCREWS-CUP POINT KITS

Description of contents	Number of Parts	Part No.
Cup Point Set Screws-Stainless Steel, Hex Head Assorted Sizes from #2-56 to 114-20.	200	Y23K

METRIC SET SCREWS-CUP POINT KITS

Description of Contents	Number of Parts	Part No.
Socket Set Screws-Hexagon Type, Cup Point, stainless steel. Assorted Sizes from M1.6 x 0.35 to M10 x 1.5.	200	MAK18

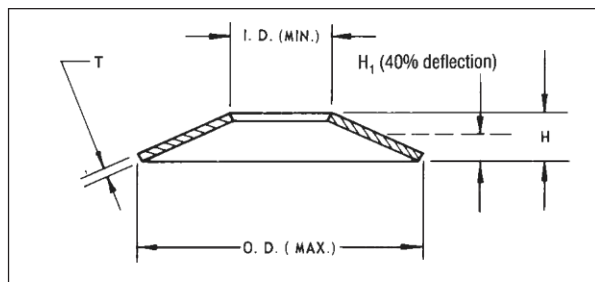
BRASS TIP SET SCREWS



Material: Heat treated alloy steel with brass insert
Finish: Black Oxide

Screw Size	L	p	T	Part Number
2-56	118 114	1rJ2	1rJ2	CS-85 CS-86 CS-87 CS-88 CS-89
4-40	118 114 318	1/16	1rJ2	CS-90 CS-91 CS-92 CS-93
6-32	118 114 112	1/16	1rJ2	CS-94 CS-95 CS-96 CS-97
8-32	118 114 7/16 112	3rJ2	3164	CS-98 CS-99
10-32	118 114 112	3rJ2	3164	

BELLEVILLE SPRING WASHER



Inside Dia.	Outside Dia.	T	H (Approx.)	H ₁ (Approx.)	*P ₁ ± 10%	Calculated Load at Flat Position—Lbs.	Part No.
.093	.187	.010	.015	.013	14	25	D6-20
.125	.250	.0133	.020	.017	23	43	D6-21
.156	.312	.0166	.025	.021	37	67	D6-22
.190	.375	.020	.030	.025	54	99	D6-23
.255	.500	.025	.038	.031	85	144	D6-24
.317	.625	.032	.048	.040	130	234	D6-25
.380	.750	.040	.059	.049	211	373	D6-26
.505	1.000	.050	.075	.062	306	540	D6-27

*LOAD AT H₁

**Material: 300 Series Stainless Steel
Spring Steel**

STACKED BELLEVILLE SPRING WASHERS

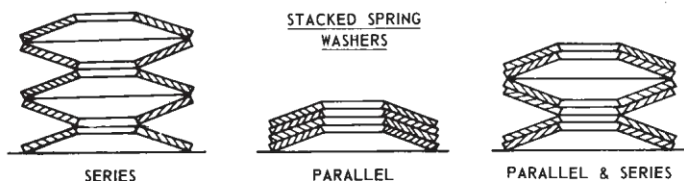
Deflection in a single Belleville Spring Washer is small. Series stacking increases the deflection in proportion to the number of washers, but the load remains the same as a single washer. Parallel stacking increases the load approximately proportional to the number of washers (a 5% to 10% load loss per washer is introduced).

ADVANTAGES:

- Stainless Steel non-corrosive
- High loads in small space.
- Combine washers (series or parallel) to vary load carrying possibilities.

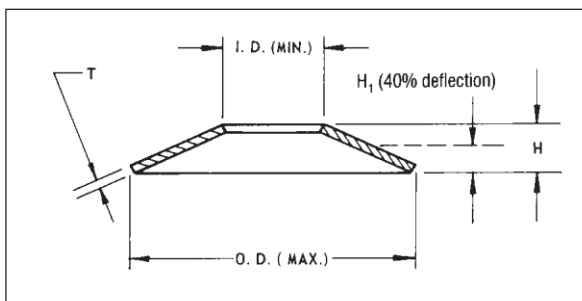
BELLEVILLE SPRING WASHER KITS

Description of Contents	Number of Parts	Part No.
Belleville Spring Washers-Stainless Steel. Eight Sizes from .093 to .505 Inside Diameters.	150	Y13K



METRIC BELLEVILLE SPRING WASHER

All Dimensions In Millimeters



Inside Dia.	Outside Dia.	T	H (Approx.)	H ₁ (Approx.)	*P ₁ ± 10%	Load at Flat Position Newtons	Part No.
3.2	8	0.3	0.55	0.45	66	126	MBW1-1
4.2	8	0.4	0.60	0.52	120	267	MBW1-2
6.2	12.5	0.7	1.00	0.88	369	846	MBW1-3
8.2	18	0.8	1.30	1.10	465	977	MBW1-4
10.2	20	1.1	1.55	1.37	846	1967	MBW1-5
12.2	25	1.5	2.05	1.83	1615	3786	MBW1-6

*LOAD AT H₁

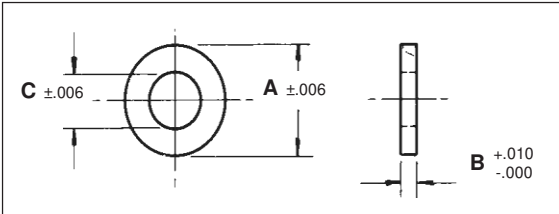
**Material: Carbon Spring Steel,
Optional Bright Zinc Finish**

METRIC BELLEVILLE SPRING WASHER KITS

Description of Contents	Number of Parts	Part No.
Belleville Spring Washers, carbon spring steel, plated. Six sizes from 3.2 to 12.2 inside diameters.	120	MAK11

PRECISION WASHERS

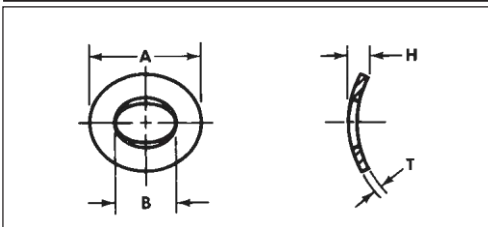
Machined



Material: 300 Series Stainless Steel

Screw Size (Ref.)	A	B	C	Part No.
# 4	1/4		.116	3150
# 6	5/16	1/16	.144	3151
# 8	3/8		.169	3152
#10	7/16	5/64	.196	3153
1/4	1/2		.257	3154
5/16	5/8	3/32	.323	3155
3/8	3/4		.386	3156

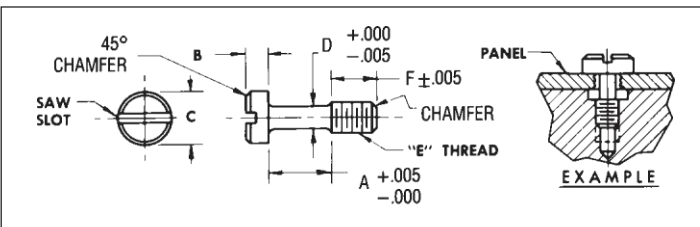
CURVED WASHERS



Material: 300 Series Stainless Steel
Spring Tempered

A	B	T	H (Approx.)	Hole Size	Screw Size	Part No.
.245	.135	.006	.034	1/4	# 5	D33-1
.270	.148	.007	.035	9/32	# 6	D33-2
.322	.174	.0075	.042	11/32	# 8	D33-3
.370	.200	.009	.047	3/8	#10	D33-4
.490	.265	.011	.063	1/2	1/4	D33-6
.612	.327	.013	.077	5/8	5/16	D33-7

CAPTIVE SCREWS

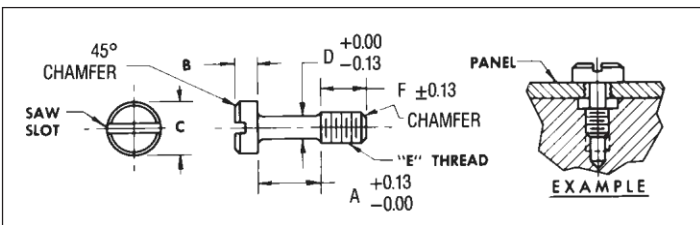


Material: 300 Series Stainless Steel

For Panel Thickness	A	B	C	D	E	F	Part No.
1/16	.281						Y9-1
1/8	.343	1/8	1/4	.072	# 4-40	.187	Y9-2
1/16	.312						Y9-3
1/8	.375	1/8	9/32	.086	# 6-32	.218	Y9-4
3/16	.437						Y9-5
1/8	.406						Y9-6
3/16	.468	5/32	5/16	.114	# 8-32	.250	Y9-7
1/4	.531						Y9-8
3/16	.531	3/16	3/8	.136	#10-32	.312	Y9-9
1/4	.593						Y9-10

METRIC CAPTIVE SCREWS

All Dimensions In Millimeters

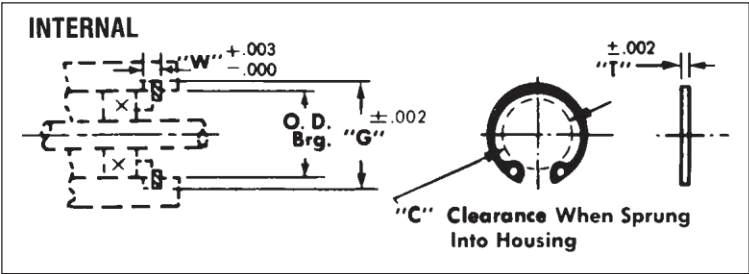


Material: 300 Series Stainless Steel

For Panel Thickness	A	B	C	D	E	F	Part No.
1.5	6.75						MCS1-1
3	8.25	2	5.2	2.14	M3	4.50	MCS1-2
3	9.75						MCS1-3
5	11.75	2.8	7	2.89	M4	6.00	MCS1-4
6	12.75						MCS1-5
5	13.25	3.5	9	3.77	M5	7.50	MCS1-6
6	14.25						MCS1-7

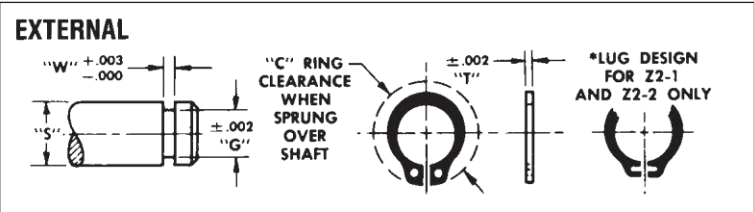
RETAINING RINGS

Internal, External, External-E Ring, Bowed Series



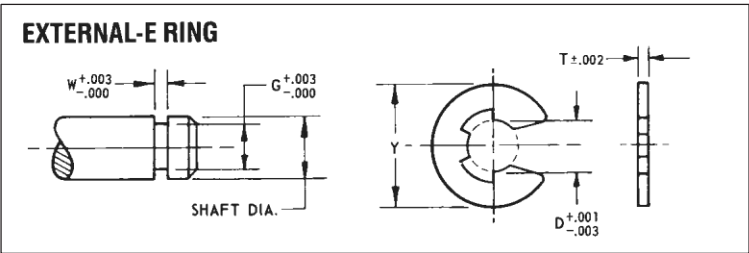
Material: PH 15-7 MO Stainless Steel

Maximum Shaft Dia. (Ref.)	Groove Dims.		T	C	O.D. Brg.	Part No.
	G	W				
.156	.397	.029	.025	.20	.375	Z1-1
.187	.530	.039	.035	.26	.500	Z1-2
.250	.665	.039	.035	.34	.625	Z1-3
.375	.931	.046	.042	.54	.875	Z1-5



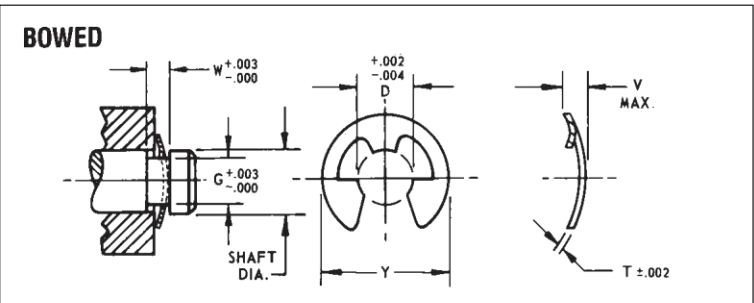
Material: PH 15-7 MO Stainless Steel
*Beryllium Copper

Shaft Dia. (Ref.)	Groove Dims.		T	C	Part No.
	G	W			
.125	.117	.012	.010	.22	*Z2-1
.187	.175	.018	.015	.30	*Z2-2
.250	.230	.029	.025	.45	Z2-3
.375	.352	.029	.025	.61	Z2-5
.500	.468	.039	.035	.77	Z2-6



Material: PH 15-7 MO Stainless Steel

Shaft Dia.	Groove Dims.		Y	D	T	Part No.
	G	W				
.093	.074	.018	.187	.073	.015	Z3-7
.125	.095	.018	.230	.094	.015	Z3-1
.156	.116	.029	.282	.114	.025	Z3-8
.187	.147	.029	.335	.145	.025	Z3-2
.250	.210	.029	.527	.207	.025	Z3-3
.312	.250	.029	.500	.243	.025	Z3-4
.375	.303	.039	.660	.300	.035	Z3-5
.500	.396	.046	.800	.392	.042	Z3-6



Material: PH 15-7 MO Stainless Steel

Shaft Dia.	Groove Dims.		Y	D	T	V Max.	Part No.
	G	W					
.125	.095	.022	.230	.094	.010	.033	Z4-1
.187	.147	.030	.335	.145	.015	.043	Z4-2
.250	.210	.049	.527	.207	.025	.067	Z4-3
.312	.250	.047	.500	.243	.025	.065	Z4-4
.375	.303	.060	.660	.300	.035	.076	Z4-5
.500	.395	.073	.800	.392	.042	.093	Z4-6

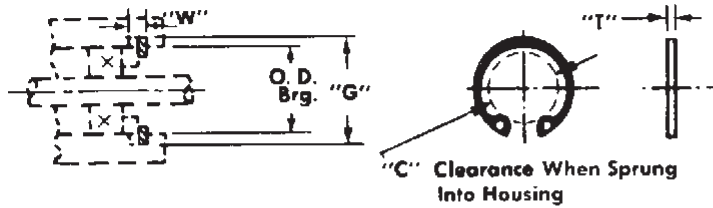
RETAINING RINGS KIT

Description of Contents	Number of Parts	Part No.
Retaining Rings-Stainless Steel Bearing, Shaft, and Snap Types for shaft sizes 1/8" to 1/4".	400	Y9K

METRIC RETAINING RINGS

All Dimensions In Millimeters ■ Internal, External, External-E Ring Series

INTERNAL



Material: Spring Steel

O.D. BRG.	Groove Dims.			T	C	Part No.
	G	tol	W (min.)			
10	10.4	+0.11	1.1	1.0	4.0	MRR1-2
11	11.4	+0.11	1.1	1.0	4.8	MRR1-3
13	13.6	+0.11	1.1	1.0	6.4	MRR1-4
15	15.7	+0.11	1.1	1.0	8.3	MRR1-5
16	16.8	+0.11	1.1	1.0	9.2	MRR1-6
19	20.0	+0.15	1.1	1.0	11.8	MRR1-7
22	23.0	+0.15	1.1	1.0	14.6	MRR1-8
26	27.2	+0.21	1.3	1.2	17.8	MRR1-9

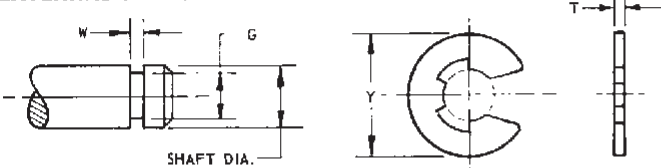
EXTERNAL



Material: Spring Steel

Shaft Dia. (S)	Groove Dims.			T	C	Part No.
	G	tol	W (min.)			
4	3.8	-0.04	0.5	0.4	8.2	MRR2-2
5	4.8	-0.04	0.7	0.6	9.8	MRR2-3
6	5.7	-0.04	0.8	0.7	11.1	MRR2-4
8	7.6	-0.06	0.9	0.8	14.0	MRR2-5
10	9.6	-0.11	1.1	1.0	16.2	MRR2-6
12	11.5	-0.11	1.1	1.0	18.1	MRR2-7

EXTERNAL-E RING



Material: Spring Steel

Shaft Dia.	Groove Dims.			Y (Fitted)	T (max.)	Part No.
	G	tol	W (min.)			
2	1.2	-0.06	0.34	3.0	0.32	MRR3-1
3	1.9	-0.06	0.54	4.5	0.52	MRR3-2
4	2.3	-0.06	0.64	6.0	0.62	MRR3-3
5	3.2	-0.07	0.64	7.0	0.62	MRR3-4
6	4.0	-0.07	0.74	9.0	0.72	MRR3-5
8	5.0	-0.07	0.74	11.0	0.72	MRR3-6
10	7.0	-0.09	0.94	14.0	0.92	MRR3-7
12	8.0	-0.09	1.05	16.0	1.03	MRR3-8

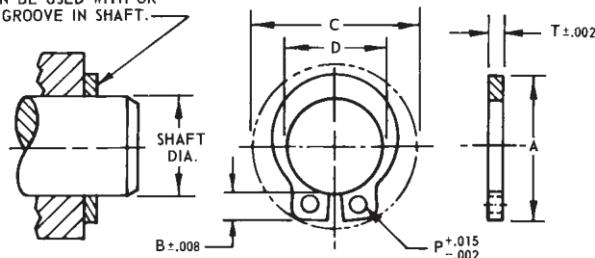
METRIC RETAINING RINGS KIT

Description of Contents	Number of Parts	Part No.
Retaining Rings, spring steel, zinc plated. Bearing, shaft and snap type for shaft sizes 3 to 5mm.	400	MAK8

RETAINING RINGS

Gripping External Series

RINGS CAN BE USED WITH OR WITHOUT GROOVE IN SHAFT.

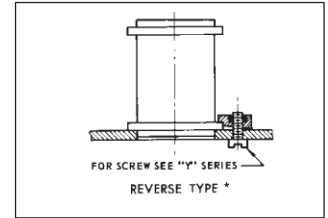
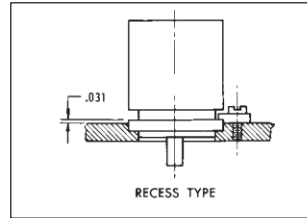
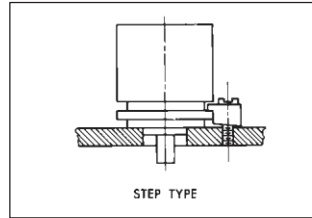
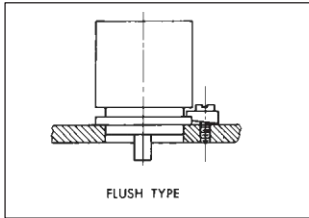


Material: PH 15-7 MO Stainless Steel

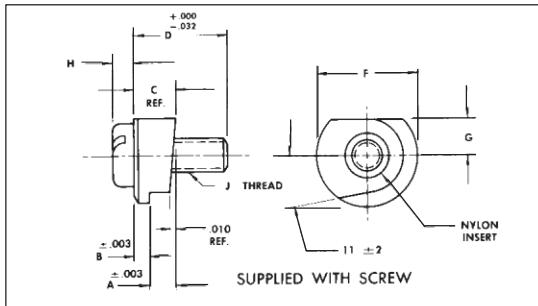
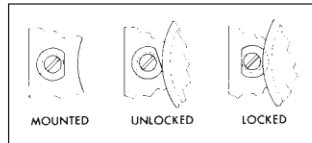
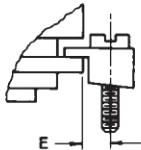
Shaft Dia.	A (Ref.)	B	C	D	T	P Dia.	Part No.
.125	.268	.078	.33	.120	.025	.042	Z5-1
.187	.364	.097	.44	.181	.035	.051	Z5-2
.250	.437	.097	.49	.238	.035	.051	Z5-3
.375	.620	.141	.74	.354	.042	.078	Z5-4
.500	.768	.158	.90	.470	.050	.078	Z5-5

MOTOR MOUNT CLEATS

Instant Nulling (Zeroing), Quick Releasing, Self Locking



TO DETERMINE BOLT CIRCLE FOR CLEAT LOCATIONS	
FOR CLEAT NO.	USE THE LARGER OF 2 TEST BOLT CIRCLES
L3-(1-12) L3-(30-31)	ADD .270" (2 x E) TO MAX. FLANGE DIA. OR ADD .400" TO MAX. DIA. OF BASE OF GROOVE
L3-(20-24)	ADD .192" (2 x E) TO MAX. FLANGE DIA. OR ADD .275" TO MAX. DIA. OF BASE OF GROOVE



SPECIFICATIONS

MATERIAL

Clamp: Sintered stainless steel Type 316; tensile strength 60,000 psi; shear strength 25,000 psi.

Screw: Slotted pan head CRES per MS-35233 and MS-35234.

Insert: Nylon (Polyamide) Type 1 per ASTM D 4066. Natural color.

FINISH

Screw: Treated per MIL-S-5002.

Clamp: As cast and tumbled.

Operating Temperature Range: -55°C to +177°C.

Vibration: 5 to 2000 cps at 15 g's acceleration with size 15 synchro.

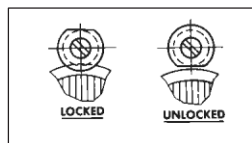
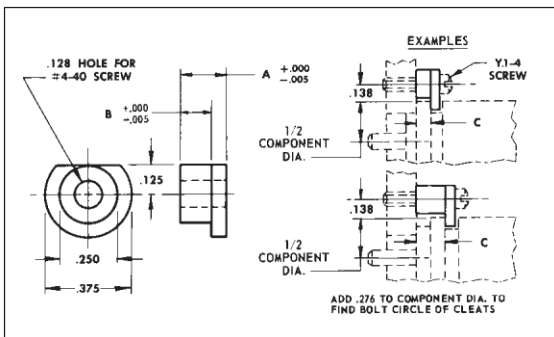
Shock: 2000 ft. lb. shock, size 15 synchro per MIL-S-901.

Meets all requirements of MIL-E-5272C and MIL-S-901.

Type Mount	A	B	C	D	E	F	G	H	J	Part No.
Flush & Recess	.031	.040	.071	.312						L3-1
Flush	.062	.040	.102	.312						L3-2
Flush	.062	.050	.112	.375						L3-3
Flush	.062	.063	.125	.375						L3-4
Flush	.093	.040	.133	.375						L3-6
Flush	.093	.050	.143	.375	.135	.390	.125	.068 Max.	#4-40	L3-7
Flush	.093	.063	.156	.375						L3-8
Step	.125	.050	.175	.375						L3-9
Step	.156	.040	.196	.375						L3-10
Step	.225	.063	.288	.437						L3-11
Flush	.250	.063	.312	.625						L3-12
Flush & Recess	.031	.040	.071	.250						L3-20
Flush	.062	.040	.102	.250						L3-22
Flush	.093	.040	.133	.312	.096	.265	.091	.053 Max.	#2-56	L3-23
Step	.125	.040	.165	.312		.260				L3-24
Reverse	.062	.063	.125	*	.135	.390	.125	*	#4-40	L3-30*
Reverse	.093	.063	.156	*		.385		*		L3-31*

*Supplied Less Screw

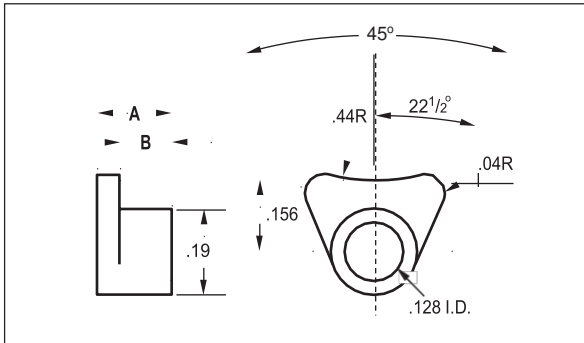
MOTOR MOUNT CLEATS



A	B	Order Screw Separately	C	Part No.
300 Series Stainless Steel				
.100	.052	Y1-4-T	.062	L2-1
.131	.081	Y1-4-U	.093	L2-2
.160	.109	Y1-4-U	.125	L2-3
.288	.238	Y1-4-W	.250	L2-4
.113	.063	Y1-4-U	.072	L2-5
.162	.112	Y1-4-U	.125	L2-6
.193	.143	Y1-4-V	.156	L2-7
.263	.213	Y1-4-W	.225	L2-8
400 Series Stainless Steel				
.100	.052	Y1-4-T	.062	L2-11
.131	.081	Y1-4-U	.093	L2-12
.160	.109	Y1-4-U	.125	L2-13
.162	.112	Y1-4-U	.125	L2-16
.193	.143	Y1-4-V	.156	L2-17
.263	.213	Y1-4-W	.225	L2-18

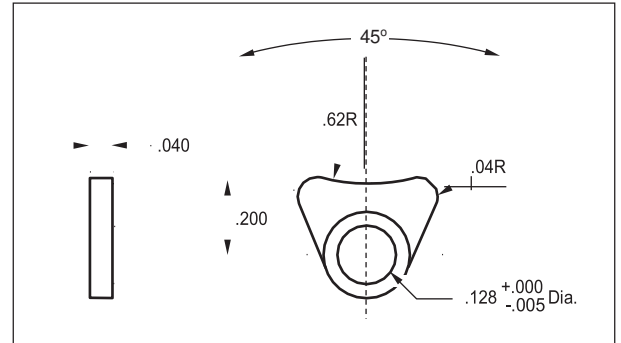
PRECISION SYNCHRO MOUNTING CLAMPS

Table of Pitch Diameters



Material: 303 Stainless Steel
Aluminum — Anodized

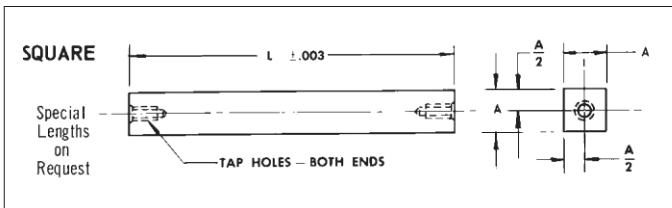
A ± .005	B +.000 -.005	Part Number	
		Stainless Steel	Aluminum
.093	.047	L2-30	L2-33
.156	.110	L2-31	L2-34
.272	.210	L2-32	L2-35



Material: 302 Stainless Steel
Aluminum — Anodized

A ± .005	Part Number	
	Stainless Steel	Aluminum
.040	L2-36	L2-37

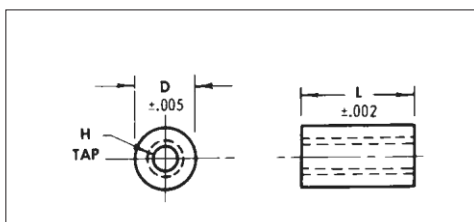
PRECISION SPACER POSTS



Material: 2024-T4 Aluminum Anodized

A = 1/4" Square Stock			A = 5/16" Square Stock			A = 3/8" Square Stock		
L	Tap Hole	Part No.	L	Tap Hole	Part No.	L	Tap Hole	Part No.
1	#6-32 UNC-2B 1/4" Deep	F1-1	3/4	#6-32 UNC-2B 1/4" Deep	F3-10	1-1/2	#8-32 UNC-2B 5/16" Deep	F2-1
1-1/2		F1-2	1		F3-11	2		F2-2
2		F1-3	1-1/4		F3-12	2-1/2		F2-3
2-1/2		F1-4	1-1/2		F3-13	3		F2-4
3		F1-5	1-3/4		F3-14	3-1/2		F2-5
3-1/2		F1-6	2		F3-15	4		F2-6
4		F1-7	2-1/2		F3-16	4-1/2		F2-7
4-1/2		F1-8	3		F3-17	5		F2-8
5		F1-9	3-1/2		F3-18	5-1/2		F2-9

STAND-OFF THREADED TYPE



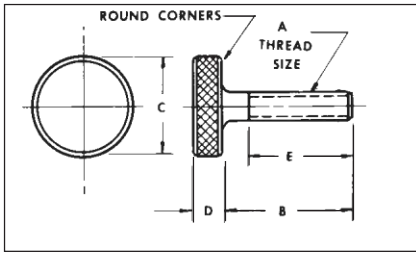
Material: 303 Stainless Steel

Minimum Thread Depth 3/8" from Each End.

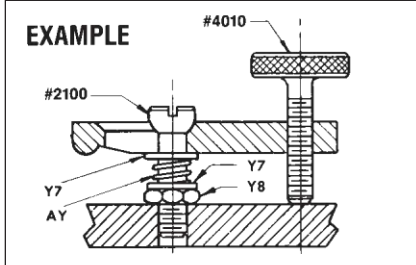
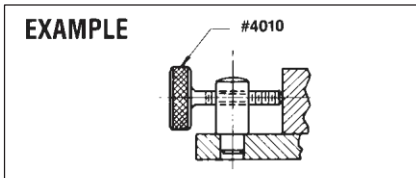
H Tap	D	L	Part No.
#4-40	3/16	.250	EG-1
		.375	EG-2
		.500	EG-3
		.750	EG-13
#6-32	1/4	.375	EG-5
		.500	EG-6
#8-32	3/8	.375	EG-9
		.500	EG-10
		.625	EG-11
		.750	EG-12
		1.000	EG-15

KNURLED THUMB SCREWS

#4-40 To 1/4-20



Material: 303 Stainless Steel

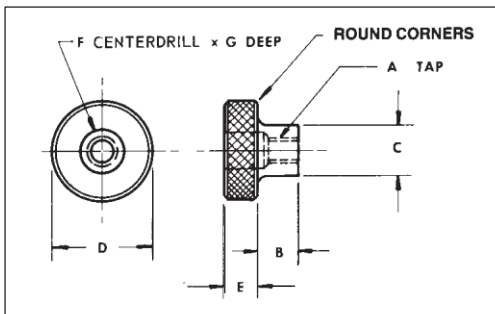


A	B	C	D	E	Part No.	
# 4-40	3/8	1/4	1/8	5/16	4010	
	1/2	1/4	1/2	7/16	4011	
	3/4	1/4	1/2	5/8	4012	
	3/8	3/8	1/8	5/16	4013	
	1/2	3/8	1/8	7/16	4014	
# 6-32	1/2	1/4	1/2	7/16	4015	
	3/4	1/4	1/2	5/8	4016	
	1	1/4	1/2	13/16	4017	
	3/8	3/8	1/8	5/16	4018	
	1/2	3/8	1/8	3/8	4019	
# 8-32	1/2	1/4	1/2	7/16	4020	
	3/4	1/4	1/2	5/8	4021	
	1	1/4	1/2	13/16	4022	
	3/8	3/8	1/8	5/16	4023	
	1/2	3/8	1/8	3/8	4024	
#10-24	1/2	3/8	3/16	7/16	4025	
	3/4			5/8	4026	
	1			13/16	4027	
	3/4	1/2		5/8	4029	
	1			13/16	4030	
	1-1/4			1	4031	
	1-1/2	3/4		1-1/4	4032	
	3/4			3/4	5/8	4033

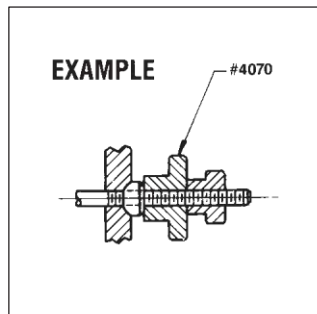
A	B	C	D	E	Part No.
#10-32	1/2	3/8	3/16	7/16	4037
	3/4			5/8	4038
	1			13/16	4039
	1-1/4			1	4040
	3/4	1/2		5/8	4041
	1			13/16	4042
	1-1/4			1	4043
	1-1/2			1-1/4	4044
	3/4	3/4		5/8	4045
	1			13/16	4046
1-1/4	1			4047	
1-1/2	1-1/4			4048	
1/4-20	3/4	3/4	3/16	5/8	4049
	1			13/16	4050
	1-1/4			1	4051
	1-1/2			1-1/4	4052
	2	3/4		1-5/8	4053
	3/4	1		5/8	4054
	1			13/16	4055
	1-1/4			1	4056
	1-1/2			1-1/4	4057
	2			1-5/8	4058

KNURLED THUMB NUTS

#4-40 To 1/4-20



Material: 303 Stainless Steel



A	B	C	D	E	F	G	Part No.
# 4-40	1/4	1/4	1/2	1/8	1/8	1/8	4070
	1/2		1/2			3/8	4071
# 6-32	1/4	1/4	1/2			3/32	4074
	1/2		1/2	1/8	#26	11/32	4075
	3/4		3/4			3/32	4076
# 8-32	1/4	5/16	1/2				4078
	1/2		1/2			1/4	4079
	3/4		3/4	1/8	#15		4080
	1/2		3/4		#15	1/4	4081
#10-24	1/4	3/8	1/2				4082
	1/4		1	3/16			4084
	1/2		1		13/64	1/4	4085
#10-32	1/4	3/8	1/2				4086
	1/2		1/2		13/64	1/4	4087
	3/4		1	3/16			4088
	1/2		1		13/64	1/4	4089
1/4-20	1/4	1/2	3/4				4090
	1/2		3/4		17/64	1/4	4091
	3/4		1	1/4			4092
	1/2		1		17/64	1/4	4093
	3/4		1		17/64	1/2	4094