

Catálogo

2015-2016

**" LA PIEZA ADECUADA, EN EL LUGAR INDICADO,
EN EL MOMENTO REQUERIDO "**

Industrial



www.calgro.com.mx 36091649 PARTES PARA MANTENIMIENTO INDUSTRIAL,
HERRAMIENTAS, TORNILLERÍA, SEGURIDAD PERSONAL, EQUIPOS, SUMINISTROS,
ELECTRICIDAD Y MUCHO MÁS, PRODUCTOS NACIONALES Y DE IMPORTACIÓN.

Hex Capscrews, Nuts, Hoist Rings and Thread Repairs

Grade 8 and Grade 5 Fasteners

Metric Fasteners

Stainless Steel Fasteners

Heavy-Duty Hoist Rings

Thread Repair























Grade 8 and Grade 5 Hex Head Capscrews
Long Length, Large Diameter – Non-Stock*

- UNC threads, black finish
- Meets the following specifications: SAE J429-Grade 8, ASTM A354-Grade BD
- All capscrews carry manufacturer's identification



Dia.	Length (Inches)	Grade 8 Part No.	Grade 5 Part No.	Pkg. Qty.
 1/2-13 UNC  Wrench Size 3/4"	8-1/2	A21300	21300	1
	9	A21301	21301	1
	9-1/2	A21302	21302	1
	10	A21303	21303	1
	10-1/2	A21304	21304	1
	11	A21305	21305	1
	11-1/2	A21306	21306	1
	12	A21307	21307	1
	12-1/2	A21308	21308	1
	13	A21309	21309	1
 5/8-11 UNC  Wrench Size 15/16"	13-1/2	A21310	21310	1
	14	A21311	21311	1
	10-1/2	A21312	21312	1
	11	A21313	21313	1
	11-1/2	A21314	21314	1
	12	A21315	21315	1
	12-1/2	A21316	21316	1
	13	A21317	21317	1
	13-1/2	A21318	21318	1
	14	A21319	21319	1
 3/4-10 UNC  Wrench Size 1-1/8"	14-1/2	A21320	21320	1
	15	A21321	21321	1
	15-1/2	A21322	21322	1
	16	A21323	21323	1
	16-1/2	A21324	21324	1
	17	A21325	21325	1
	17-1/2	A21326	21326	1
	18	A21327	21327	1
	18-1/2	A21328	21328	1
	19	A21329	21329	1
 1-1/2-7 UNC  Wrench Size 1-11/16"	19-1/2	A21330	21330	1
	20	A21331	21331	1
	10-1/2	A21332	21332	1
	11	A21333	21333	1
	11-1/2	A21334	21334	1
	12	A21335	21335	1
	12-1/2	A21336	21336	1
	13	A21337	21337	1
	13-1/2	A21338	21338	1
	14	A21339	21339	1

*Non-stock items must be written on a separate order form and are non-returnable. Due to special processing, please allow two to three weeks for delivery.











Dia.	Length (Inches)	Grade 8 Part No.	Grade 5 Part No.	Pkg. Qty.
 7/8-9 UNC  Wrench Size 1-5/16"	10-1/2	A21352	21352	1
	11	A21353	21353	1
	11-1/2	A21354	21354	1
	12	A21355	21355	1
	12-1/2	A21356	21356	1
	13	A21357	21357	1
	13-1/2	A21358	21358	1
	14	A21359	21359	1
	14-1/2	A21360	21360	1
	15	A21361	21361	1
 1-8 UNC  Wrench Size 1-1/2"	15-1/2	A21362	21362	1
	16	A21363	21363	1
	16-1/2	A21364	21364	1
	17	A21365	21365	1
	17-1/2	A21366	21366	1
	18	A21367	21367	1
	18-1/2	A21368	21368	1
	19	A21369	21369	1
	19-1/2	A21370	21370	1
	20	A21371	21371	1
 1-1/8-7 UNC  Wrench Size 1-11/16"	10-1/2	A21372	21372	1
	11	A21373	21373	1
	11-1/2	A21374	21374	1
	12	A21375	21375	1
	12-1/2	A21376	21376	1
	13	A21377	21377	1
	14	A21378	21378	1
	14-1/2	A21379	21379	1
	15	A21380	21380	1
	15-1/2	A21381	21381	1
 1-1/2-7 UNC  Wrench Size 1-11/16"	16	A21382	21382	1
	16-1/2	A21383	21383	1
	17	A21384	21384	1
	17-1/2	A21385	21385	1
	18	A21386	21386	1
	18-1/2	A21387	21387	1
	19	A21388	21388	1
	19-1/2	A21389	21389	1
	20	A21390	21390	1
	10-1/2	A21391	21391	1
 1-1/2-7 UNC  Wrench Size 1-11/16"	11	A21392	21392	1
	11-1/2	A21393	21393	1
	12	A21394	21394	1
	12-1/2	A21395	21395	1
	13	A21396	21396	1
	13-1/2	A21397	21397	1
	14	A21398	21398	1
	14-1/2	A21399	21399	1
	15	A21400	21400	1
	15-1/2	A21401	21401	1
 1-1/2-7 UNC Wrench Size 1-11/16"	16	A21402	21402	1
	16-1/2	A21403	21403	1
	17	A21404	21404	1
	17-1/2	A21405	21405	1
	18	A21406	21406	1
	18-1/2	A21407	21407	1
	19	A21408	21408	1
	19-1/2	A21409	21409	1
	20	A21410	21410	1
	10-1/2	A21411	21411	1













GRADE 8 and GRADE 5 Fasteners

www.calgro.com.mx Tel.(33)3609-1649
ventas@calgro.com.mx

Grade 8 and Grade 5 Hex Head Capscrews Long Length, Large Diameter – Non-Stock*

Dia.	Length (Inches)	Grade 8 Part No.	Grade 5 Part No.	Pkg. Qty.
 1-1/4-7 UNC  Wrench Size 1-7/8"	10-1/2	A21411	21411	1
	11	A21412	21412	1
	11-1/2	A21413	21413	1
	12	A21414	21414	1
	12-1/2	A21415	21415	1
	13	A21416	21416	1
	13-1/2	A21417	21417	1
	14	A21418	21418	1
	14-1/2	A21419	21419	1
	15	A21420	21420	1
	15-1/2	A21421	21421	1
	16	A21422	21422	1
	16-1/2	A21423	21423	1
	17	A21424	21424	1
	17-1/2	A21425	21425	1
	18	A21426	21426	1
	18-1/2	A21427	21427	1
	19	A21428	21428	1
	19-1/2	A21429	21429	1
	20	A21430	21430	1
 1-3/8-6 UNC  Wrench Size 2-1/16"	4	A21431	21431	1
	4-1/2	A21432	21432	1
	4-3/4	A21433	21433	1
	5	A21434	21434	1
	5-1/2	A21435	21435	1
	6	A21436	21436	1
	6-1/2	A21437	21437	1
	7	A21438	21438	1
	7-1/2	A21439	21439	1
	8	A21440	21440	1
	8-1/2	A21441	21441	1
	9	A21442	21442	1
	9-1/2	A21443	21443	1
	10	A21444	21444	1
	10-1/2	A21445	21445	1
	11	A21446	21446	1
	11-1/2	A21447	21447	1
	12	A21448	21448	1
	12-1/2	A21449	21449	1
	13	A21450	21450	1
	13-1/2	A21451	21451	1
 1-3/8-6 UNC  Wrench Size 2-1/16"	14	A21452	21452	1
	14-1/2	A21453	21453	1
	15	A21454	21454	1
	15-1/2	A21455	21455	1
	16	A21456	21456	1
	16-1/2	A21457	21457	1
	17	A21458	21458	1
	17-1/2	A21459	21459	1
	18	A21460	21460	1
	18-1/2	A21461	21461	1
 1-3/8-6 UNC  Wrench Size 2-1/16"	19	A21462	21462	1
	19-1/2	A21463	21463	1
 1-3/8-6 UNC  Wrench Size 2-1/16"	20	A21464	21464	1

*Non-stock items must be written on a separate order form and are non-returnable. Due to special processing, please allow two to three weeks for delivery.

Dia.	Length (Inches)	Grade 8 Part No.	Grade 5 Part No.	Pkg. Qty.
 1-1/2-6 UNC  Wrench Size 2-1/4"	4	A21465	21465	1
	4-1/2	A21466	21466	1
	4-3/4	A21467	21467	1
	5	A21468	21468	1
	5-1/2	A21469	21469	1
	6	A21470	21470	1
	6-1/2	A21471	21471	1
	7	A21472	21472	1
	7-1/2	A21473	21473	1
	8	A21474	21474	1
	8-1/2	A21475	21475	1
	9	A21476	21476	1
	9-1/2	A21477	21477	1
	10	A21478	21478	1
	10-1/2	A21479	21479	1
	11	A21480	21480	1
	11-1/2	A21481	21481	1
	12	A21482	21482	1
	12-1/2	A21483	21483	1
	13	A21484	21484	1
	13-1/2	A21485	21485	1
 1-3/4-5 UNC  Wrench Size 2-5/8"	14	A21486	21486	1
	14-1/2	A21487	21487	1
	15	A21488	21488	1
	15-1/2	A21489	21489	1
	16	A21490	21490	1
	16-1/2	A21491	21491	1
	17	A21492	21492	1
	17-1/2	A21493	21493	1
	18	A21494	21494	1
	18-1/2	A21495	21495	1
	19	A21496	21496	1
	19-1/2	A21497	21497	1
	20	A21498	21498	1
	4	A21499	21499	1
	4-1/2	A21500	21500	1
	4-3/4	A21501	21501	1
	5	A21502	21502	1
	5-1/2	A21503	21503	1
	6	A21504	21504	1
	6-1/2	A21505	21505	1
	7	A21506	21506	1
	7-1/2	A21507	21507	1
	8	A21508	21508	1
 1-3/4-5 UNC  Wrench Size 2-5/8"	8-1/2	A21509	21509	1
	9	A21510	21510	1
	9-1/2	A21511	21511	1
	10	A21512	21512	1
	10-1/2	A21513	21513	1
	11	A21514	21514	1
	11-1/2	A21515	21515	1
	12	A21516	21516	1
	12-1/2	A21517	21517	1
	13	A21518	21518	1
 1-3/4-5 UNC  Wrench Size 2-5/8"	13-1/2	A21519	21519	1
	14	A21520	21520	1
	14-1/2	A21521	21521	1
	15	A21522	21522	1
	15-1/2	A21523	21523	1
	16	A21524	21524	1
	16-1/2	A21525	21525	1
	17	A21526	21526	1
	17-1/2	A21527	21527	1
	18	A21528	21528	1
 1-3/4-5 UNC  Wrench Size 2-5/8"	18-1/2	A21529	21529	1
	19	A21530	21530	1
	19-1/2	A21531	21531	1
	20	A21532	21532	1

GRADE 8, GRADE 5 and GRADE 2 Fasteners



Grade 8 and Grade 5 Hex Head Capscrews
Long Length, Large Diameter – Non-Stock*

Dia.	Length (Inches)	Grade 8 Part No.	Grade 5 Part No.	Pkg. Qty.
 2-4-1/2 UNC Wrench Size 3"	4	A21533	21533	1
	4-1/2	A21534	21534	1
	4-3/4	A21535	21535	1
	5	A21536	21536	1
	5-1/2	A21537	21537	1
	6	A21538	21538	1
	6-1/2	A21539	21539	1
	7	A21540	21540	1
	7-1/2	A21541	21541	1
	8	A21542	21542	1
	8-1/2	A21543	21543	1
	9	A21544	21544	1
	9-1/2	A21545	21545	1
	10	A21546	21546	1
	10-1/2	A21547	21547	1
	11	A21548	21548	1
	11-1/2	A21549	21549	1

Dia.	Length (Inches)	Grade 8 Part No.	Grade 5 Part No.	Pkg. Qty.
 2-4-1/2 UNC Wrench Size 3"	12	A21550	21550	1
	12-1/2	A21551	21551	1
	13	A21552	21552	1
	13-1/2	A21553	21553	1
	14	A21554	21554	1
	14-1/2	A21555	21555	1
	15	A21556	21556	1
	15-1/2	A21557	21557	1
	16	A21558	21558	1
	16-1/2	A21559	21559	1
	17	A21560	21560	1
	17-1/2	A21561	21561	1
	18	A21562	21562	1
	18-1/2	A21563	21563	1
	19	A21564	21564	1
	19-1/2	A21565	21565	1
	20	A21566	21566	1

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Grade 2 Hex Head Capscrews

Dia.	Length (Inches)	Part No.	Pkg. Qty.
1/4-20	1/2	4000	100
	3/4	4001	100
	1	4002	100
	1-1/4	4003	100
	1-1/2	4004	100
	1-3/4	4005	100
	2	4006	100
	2-1/4	4007	100
	2-1/2	4008	100
	3	4009	100
	3-1/2	4010	100
5/16-18	4	4011	100
	4-1/2	4012	100
	5	4013	100
	6	4014	100
	7	20000	10
	1/2	4015	50
	3/4	4016	50
	1	4017	50
	1-1/4	4018	50
	1-1/2	4019	50
	2	4020	50
3/8-16	2-1/4	4021	50
	2-1/2	4022	50
	3	4023	50
	3-1/2	4024	50
	4	4025	50
	4-1/2	4026	50
	5	4027	50
	6	4028	50
	3/4	4029	50
	1	4030	50
	1-1/4	4031	50
5/8-11	1-1/2	4032	50
	1-3/4	4033	50
	2	4034	50
	2-1/4	4035	50
	2-1/2	4036	50
	2-3/4	4037	50
	3	4038	50
	3-1/2	4039	50
	4	4040	50
	4-1/2	4041	50
	5	4042	50
7/8-9	5-1/2	4043	50
	6	4044	50
	7	20001	10
	8	20002	10
	1	4071	25
	1-1/4	4072	25
	1-1/2	4073	25
	1-3/4	4074	25
	2	4075	25
	2-1/2	4076	25
	3	4077	25
1-8	3-1/2	4078	25
	4	4079	25
	4-1/2	4080	25
	5	4081	25
	6	4082	20
	7	20010	10
	8	20011	10
	9	20012	10
	10	20013	10
	12	20015	10

Dia.	Length (Inches)	Part No.	Pkg. Qty.
7/16-14	1	4045	50
	1-1/4	4046	50
	1-1/2	4047	50
	1-3/4	4048	50
	2	4049	50
	2-1/2	4050	50
	3	4051	50
	3-1/2	4052	50
	4	4053	50
	4-1/2	4054	50
	5	4055	50
1/2-13	6	4056	50
	1	4057	50
	1-1/4	4058	50
	1-1/2	4059	50
	1-3/4	4060	50
	2	4061	50
	2-1/4	4062	50
	2-1/2	4063	50
	3	4064	50
	3-1/2	4065	50
	4	4066	50
5/8-11	4-1/2	4067	50
	5	4068	50
	5-1/2	4069	50
	6	4070	50
	6-1/2	20003	10
	7	20004	10
	7-1/2	20005	10
	8	20006	10
	9	20028	10
	10	20007	10
	12	20009	10
1-8	1	4071	25
	1-1/4	4072	25
	1-1/2	4073	25
	1-3/4	4074	25
	2	4075	25
	2-1/2	4076	25
	3	4077	25
	3-1/2	4078	25
	4	4079	25
	4-1/2	4080	25
	5	4081	25
3/4-10	6	4082	20
	7	20010	10
	8	20011	10
	9	20012	10
	10	20013	10
	12	20015	10
	1	4094	10
	4	4096	10
	4-1/2	4097	10
	5	4098	10
	6	4099	10
5/16-18	2-1/2	4100	10
	3	4101	10
	4	4103	10
	4-1/2	4104	10
	5	4105	10
	6	4106	10
	1	4094	10
	4	4096	10
	4-1/2	4097	10
	5	4098	10
	6	4099	10
3/8-16	2-1/2	4100	10
	3	4101	10
	4	4103	10
	4-1/2	4104	10
	5	4105	10
	6	4106	10
	1	4094	10
	4	4096	10
	4-1/2	4097	10
	5	4098	10
	6	4099	10



- UNC threads
- Also for use as a high-grade machine bolt
- Manufactured to SAE Grade 2 specifications
- SAE-approved cold-forming steel
- Full diameter shank
- Class 2A thread fit
- Rolled threads



Dia.	Length (Inches)	Part No.	Pkg. Qty.
3/4-10	1-1/2	4083	25
	1-3/4	4084	25
	2	4085	25
	2-1/2	4086	25
	3	4087	25
	3-1/2	4088	25
	4	4089	25
	4-1/2	4090	25
	5	4091	25
	6	4093	20
	7	20016	10
7/8-9	8	20017	10
	10	20019	10
	3	4094	10
	4	4096	10
	4-1/2	4097	10
	5	4098	10
	6	4099	10
	2-1/2	4100	10
	3	4101	10
	4	4103	10
	4-1/2	4104	10
1-8	5	4105	10
	6	4106	10
	1	4094	10
	4	4096	10
	4-1/2	4097	10
	5	4098	10
	6	4099	10
	2-1/2	4100	10
	3	4101	10
	4	4103	10
	4-1/2	4104	10

Minimum Threaded Length –
Up to 6" Long: (2 x Diameter) + 1/4"
Over 6" Long: (2 x Diameter) + 1/2"



HEX NUTS

Hex and Slotted Hex Nuts

- Conform to ANSI B18.2.2 and SAE J995 specifications
- Zinc-plated unless noted
- Controlled hardness
- Washer-faced
- Burr-free Class 2B threads



Size	Grade 8		Grade 8 Plain Finish		Grade 5		Grade 2		Grade 2 Bulk		Grade 2 Slotted Hex	
	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.
1/4-20	FA68400	100	BC68400	100	FA95677	100	100	100	100M01	250	52550	100
1/4-28	FA68410	100	BC68410	100	FA95687	100	110	100	110M01	250	85148	100
5/16-18	FA68401	100	BC68401	100	FA95678	100	101	100	101M01	250	52551	100
5/16-24	FA68411	100	BC68411	100	FA95688	100	111	100	111M01	250	85149	100
3/8-16	FA68402	100	BC68402	100	FA95679	100	102	100	102M01	250	52552	100
3/8-24	FA68412	100	BC68412	100	FA95689	100	112	100	112M01	250	85150	100
7/16-14	FA68403	50	BC68403	50	FA95680	50	103	50	103M01	100	52553	50
7/16-14*	FA68403A	50					103A	50				
7/16-20	FA68413	50	BC68413	50	FA95690	50	113	50			85151	50
7/16-20*	FA68413A	50					113A	50				
1/2-13	FA68404	50	BC68404	50	FA95681	50	104	50	104M01	100	52554	50
1/2-20	FA68414	50	BC68414	50	FA95691	50	114	50			85152	50
9/16-12	FA68405	50	BC68405	50	FA95682	50	105	50			52555	50
9/16-18	FA68415	50	BC68415	50	FA28177	25	115	50			85153	50
5/8-11	FA68406	25	BC68406	25	FA95683	25	106	25	106M01	50	52556	25
5/8-18	FA68416	25	BC68416	25	FA95692	25	116	25			85154	25
3/4-10	FA68407	25	BC68407	25	FA95684	25	107	25			52557	25
3/4-16	FA68417	25	BC68417	25	FA95693	25	117	25			85155	25
7/8-9	FA68408	25	BC68408	25	FA95685	25	108	25			52558	25
7/8-14	FA68418	25	BC68418	25	FA95694	25	118	25			85156	25
1-8	FA68409	10	BC68409	10	FA95686	10	109	25			52559	25
1-14	FA68419	10	BC68419	10	FA95695	10	119	25			85157	25
1-1/8-7	FA124A	10			FA61246	10	109A	10			58936	5
1-1/8-12	FA120A	10			FA61247	10	119A	10			58937	5
1-1/4-7	FA125A	10			FA61248	10	109B	10			58938	5
1-1/4-12	FA121A	10			FA61249	10	119B	10			58939	5
1-1/2-6	FA126A	10					109C	10			58940	5
1-1/2-12	FA122A	10					119C	10			58941	5

*Old standard 5/8" across the flats



Available In Assortments

Grade 8	Grade 5	Grade 2 Slotted Hex
LP795 (8 items, 950 pieces)	LP790 (8 items, 1,100 pieces)	LP609 (10 items, 190 pieces)
LP796 (8 items, 750 pieces)	LP791 (8 items, 950 pieces)	See page 6-32
LP797 (8 items, 500 pieces)	LP792 (8 items, 650 pieces)	
LP798 (8 items, 425 pieces)	LP793 (8 items, 425 pieces)	
LP799 (8 items, 425 pieces)	LP794 (8 items, 425 pieces)	
See page 6-27	See page 6-31	



Heavy Hex Nuts

- Conform to ANSI B18.2.2 and SAE J995 specifications
- Controlled hardness
- Washer-faced
- Burr-free Class 2B threads



Size	Width Across Flats (Inches)	Height (Inches)	Part No.	Pkg. Qty.
1/4-20	1/2	15/64	160	100
5/16-18	9/16	19/64	161	100
3/8-16	11/16	23/64	162	100
7/16-14	3/4	27/64	163	50
1/2-13	7/8	31/64	164	50
5/8-11	1-1/16	39/64	166	25
3/4-10	1-1/4	47/64	167	25
7/8-9	1-7/16	55/64	168	25
1-8	1-5/8	63/64	169	25

Acorn Nuts

- Provides sealing and protection for projecting threaded parts and adds decorative touch
- Conforms to SAE Specification J483
- Hex-shaped wrenching surface
- Cap-shaped top
- Perma Plate



Size	Hex Size (Inches)	Height (Inches)	Thread Depth (Inches)	Part No.	Pkg. Qty.
6-32	5/16	11/32	5/32	87443	50
8-32	5/16	11/32	5/32	87444	50
10-24	3/8	13/32	3/16	87445	50
10-32	3/8	13/32	3/16	87446	50
1/4-20	7/16	15/32	1/4	87447	25
5/16-18	1/2	17/32	5/16	87448	25
3/8-16	9/16	5/8	3/8	87449	25
1/2-13	3/4	13/16	5/8	52148	5
5/8-11	15/16	15/16	25/32	52149	5

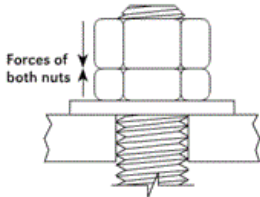


SMART

Tip

Proper Installation of Grade 2 Jam Nuts

- To properly install:
1. Tighten the jam nut snugly.
 2. Install the hex nut to proper torque.



A jam nut can cause the two nuts to press on the threads in opposite directions so that the thread is clamped between them.

Jam Nuts

- Jam Nuts are used as a second nut forced or jammed against the main nut for the purpose of locking the main nut down securely to prevent it from loosening or backing off a threaded rod, bolt or stud
- Burr-free
- Clean, sharp threads
- Perma Plate



Available In Assortment

LP101
(20 items, 320 pieces)
See page 6-32

Nylon Insert Jam Nuts

- Conform to SAE Specification 122 and ANSI/ASME Specification B18.2.2
- Grade 2, low carbon steel
- Class 2B threads



Available In Assortments

LP630
(10 items, 260 pieces)
LP631
(10 items, 260 pieces)
See page 6-32

Size	Right Hand		Left Hand		Nylon Insert	
	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.
1/4-20	1180	100	57104	50	54657	100
1/4-28	1190	100	57114	50	54671	100
5/16-18	1181	100	57105	50	54658	100
5/16-24	1191	100	57115	50	54672	100
3/8-16	1182	100	57106	50	54659	100
3/8-24	1192	100	57116	50	54673	100
7/16-14	1183	100	57107	50	54660	50
7/16-20	1193	100	57117	50	54674	50
1/2-13	1184	100	57108	25	54661	50
1/2-20	1194	100	57118	25	54675	50
9/16-12	1185	50	57109	25	54662	50
9/16-18	1195	50	57119	25	54676	50
5/8-11	1186	50	57110	25	54663	25
5/8-18	1196	50	57120	25	54677	25
3/4-10	1187	25	57111	10	54664	25
3/4-16	1197	25	57121	10	54678	25
7/8-9	1188	25	57112	5	54665	25
7/8-14	1198	25	57122	5	54679	25
1-8	1189	25	57113	5	54666	10
1-14	1199	25	57123	5	54680	10
1-1/8-7	90577	10			54667	10
1-1/8-12	90578	10			54681	10
1-1/4-7	90579	10			54668	10
1-1/4-12	90580	10			54682	10
1-3/8-6	90581	5			54669	5
1-3/8-12	90582	5			54683	5
1-1/2-6	90583	5			54670	5
1-1/2-12	90584	5			54684	5



LOCKNUTS

www.calgro.com.mx Tel.(33)3609-1649
ventas@calgro.com.mx

Nylon Insert Locknuts

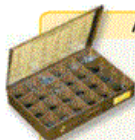
- Nylon insert has low coefficient of friction (will not damage bolt threads), high resilience, low chemical activity and relatively great hardness
- Locks uniformly over entire range of bolt thread tolerances and has low, even torque scatter, permitting repeated predictable tightening torques



Size	Grade 8		Grades 5 and 2		Flange Grade 8 (Grade G)		Flange Grades 5 and 2 (Grade F)	
	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.
6-32			320	100				
8-32			321	100				
10-24			322	100				
10-32			321A	100				
12-24			323	100				
1/4-20	53979	50	301	100	18244	50	16141	100
1/4-28	53989	50	311	100			18239	100
5/16-18	53980	50	302	100	18245	50	16142	100
5/16-24	53990	50	312	100			18240	100
3/8-16	53981	50	303	100	18246	50	16143	100
3/8-24	53991	50	313	100			18241	100
7/16-14	53982	25	304	50	18247	25	16144	50
7/16-20	53992	25	314	50				
1/2-13	53983	25	305	50	18248	25	16145	50
1/2-20	53993	25	315	50			18242	50
9/16-12	53984	10	305A	25				
9/16-18	53994	10	315A	25				
5/8-11	53985	10	306	25	18249	10	16146	25
5/8-18	53995	10	316	25				
3/4-10	53986	5	307	25	18250	5	16147	25
3/4-16	53996	5	317	25				
7/8-9	53987	5	308	25				
7/8-14	53997	5	318	25				
1-8	53988	5	309	25				
1-14	53998	5	319	25				
1-1/8-7	54016	2	342	10				
1-1/8-12	54018	2	345	10				
1-1/4-7	54017	2	343	10				
1-1/4-12	54019	2	346	10				
1-1/2-6			344	10				
1-1/2-12			347	10				

Grade 8

- Manufactured to IFI Standard 100/107
- Meets SAE Grade 8 strength requirements
- Identified by two circumferential notches on the corners of the nut



Available In Assortments

LP610
(10 items, 160 pieces)
See page 6-32
LP611
(10 items, 160 pieces)
See page 6-33

Grade 5 and Grade 2

- Manufactured to IFI standards



Available In Assortment

LP106
(20 items, 455 pieces)
See page 6-32

Flange

- Grade F Nylon Insert Flange Nuts can be used with Grade 2 or Grade 5 fasteners – Grade G for use with Grade 8
- Solves the problem of an oversized hole and eliminates the need for a washer
- Non-serrated flange will not mar the surface

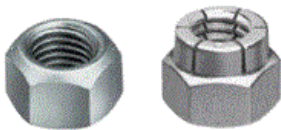


Available In Assortment

LP751
(20 items, 560 pieces)
See page 6-33



All-Metal Locknuts



Grade C

- Developed for Grade 8 and higher-strength applications
- Locking torque is retained for a minimum of five reapplications
- No galling of threads
- Cadmium-plated with Friction Control
- Meets IFI and ANSI specifications



Size	Grade C (Grade 8)		Flex-Type	
	Part No.	Pkg. Qty.	Part No.	Pkg. Qty.
10-24			50789	50
10-32			50790	50
1/4-20	80927	100	50791	50
1/4-28	80939	100	50792	50
5/16-18	80928	100	50793	25
5/16-24	80940	100	50794	25
3/8-16	80929	100	50795	25
3/8-24	80941	100	50796	25
7/16-14	80930	50		
7/16-20	80942	50		
1/2-13	80931	50	50797	10
1/2-13	80931M01	100		
1/2-20	80943	50	50798	10
9/16-12	80932	50		
9/16-18	80944	50		
5/8-11	80933	25		
5/8-18	80945	25		
3/4-10	80934	25		
3/4-16	80946	25		
7/8-9	80935	25		
7/8-14	80947	25		
1-8	80936	10		
1-8	80936M01	25		
1-14	80948	10		
1-14	80948M01	25		
1-1/8-7*	80937	10		
1-1/8-12*	80949	10		
1-1/4-7*	80938	10		
1-1/4-12*	80950	10		

*Collar style

NOTE: Not recommended for use above 450°F (232°C).
For recommended torque values, see Lawson's E546 brochure.



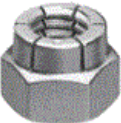
Available In Assortment

LP133

(20 items, 420 pieces)
See page 6-33

Flex-Type – Steel

- Can be used in temperatures up to 450°F (232°C)
- For use in applications up to 180,000 PSI tensile strength
- Locking torque retained for up to 15 uses
- No galling of threads
- Cadmium-plated



RELATED ITEMS

Open & Shut
Nut and Bolt Loosener
and Rust Penetrant

See page 10-50 for more information.

Open & Shut is a high-performance penetrating oil that cleans, lubricates, protects and displaces water. There is no better penetrating oil on the market today for working in damp, dirty, greasy conditions, or near ignition sources. Open & Shut is non-flammable and penetrates easily through water, rust and grime to provide lubrication to loosen nuts and bolts.

Description	Part No.	Pkg. Qty.
20 Oz. (567g) Net Wt. Aerosol Can	DA6152	3 / 12





Metric Hex Head Capscrews

Property Class 8.8

- 830 MPa (120,000 PSI) minimum ultimate tensile strength
- Comparable to SAE Grade 5



Metric DIN Specifications

DIN 933	Full Thread Coarse Pitch
DIN 931	Partial Thread Coarse Pitch
DIN 961	Full Thread Fine/Extra Fine Pitch
DIN 960	Partial Thread Fine/Extra Fine Pitch



Available In Assortments

- LP239**
(22 items, 1,120 pieces)
 - LP241**
(24 items, 285 pieces)
 - LP242**
(15 items, 183 pieces)
- See page 6-40

Length (mm)	M3		M4		M5		M6		M7		M8			
	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Fine Part No.	Pkg. Qty.
8	16148*	50	16158*	50			16161*	50						
10	16149*	50	16159*	50	16160*	50	4264*	50			58947*	50	80218*	50
12	16150*	50	4250*	50	4254*	50	27329*	50	4276*	50	27339*	50		
14	16151*	50												
15			4251*	50										
16	16152*	50					27330*	50			27340*	50	58950*	50
18											27341*	50		
20	16153*	50	80200*	50	4255*	50	27331*	50	4277*	50	27342*	50	80219*	50
22											80210*	50		
25	16154*	25	58942*	25	4256*	50	27332*	50			27343*	50	80220*	50
30	16155*	25	58943*	25	4257*	50	27333*	25	4278*	25	27344*	25	80221*	25
35	16156*	25	58944*	25	80201*	25	27334*	25			27345*	25	80222*	25
40	16157*	25	58945*	10	4259*	25	27335*	25	4279*	25	27346*	25	80223*	25
45			58946*	10	80202*	25	27336*	25			27347*	25	58951*	25
50					80203*	25	27337*	25			27348*	25	80224*	25
55							61266*	25			58948*	25		
60					80204*	25	27338*	25			27349*	25	16207*	25
65							61267*	25			58949*	25		
70					80205*	25	80208*	25			27350*	25	16208*	25
75											27351*	25		
80							91680*	10			91683*	10	16209*	10
90							91681*	10			91684*	10		
100							91682*	10			91685*	10		
120											16175*	10		
140											16176*	10		

*Full Thread

Length (mm)	M10						M12						M14			
	Coarse Part No.	Pkg. Qty.	Fine Part No.	Pkg. Qty.	X-Fine Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Fine Part No.	Pkg. Qty.	X-Fine Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Fine Part No.	Pkg. Qty.
20	61268*	25	80230*	25	80225*	25	61281*	20	80240*	20	99003*	20				
25	61269*	25	80231*	25	80226*	25	61282*	20	58958*	20	80237*	20	81892*	10	99010*	10
30	61270*	25	80232*	25	80227*	25	61283*	20	80241*	20	99004*	20	81893*	10	99011*	10
35	61271*	25	80233*	25	58954*	25	61284*	20	80242*	20	80238*	20	81894*	10	99012*	10
40	61272*	25	80234*	25	80228*	25	61285*	20	80243*	20	99005*	20	81895*	10	99013*	10
45	58952*	25					61286*	20								
50	61273*	25	80235*	25	80229*	25	61287*	20	80244*	20	80239*	20	81896*	10	99014*	10
55	61274*	25					82154*	20	80245*	20	99006*	20				
60	61275*	25	80236*	25	58955*	25	61288*	20	58959*	20	99007*	20	81897*	10	99015*	10
65	61276*	25					82155*	20	80246*	20	58961*	20				
70	61277*	25	58953*	25	58956*	25	61289*	20	58960*	20	99008*	20	81898*	10	99016*	10
75	61278*	25					82156*	10	80247*	10						
80	61279*	10			58957*	10	16182*	10	16210*	10			81899*	10	58962*	10
90	91687*	10					82157*	10	80248*	10	99009*	10	91691*	10	16211*	10
100	91688*	10					82158*	10	80249*	10			91692*	10	16212*	10
110	61280*	10					81767*	10					91693*	10		
120	16177*	10					81768*	10					91694*	10	16213*	10
130	16178*	10					91689*	10					16185*	10		
140	16179*	10					91690*	10					16186*	10		
150	16180*	10					16183*	10								
160	16181*	10					16184*	10								

*Full Thread



Metric Hex Head Capscrews
Property Class 8.8

Length (mm)	M16				M20				M24			
	Coarse Part No.	Pkg. Qty.	Fine Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.
25	16162*	10	16203*	10								
30	16163*	10	16204*	10	16166*	10						
35	16164*	10	16205*	10	16167*	10						
40	16165*	10	16206*	10	16168*	10						
45	81769*	10	99017	10	16169*	10	16171*	10				
50	81770*	10	99018	10	16170*	10	16172*	10				
55	81771	10	58963	10	81784*	10	16173*	10				
60	81772	10	99019	10	81785*	10	16174*	10				
65	81773	10	58964	10	81786	10	16192	10				
70	81774	10	99020	10	81787	10	16193	10				
75	81775	10	99021	10	81788	10	16194	10				
80	81776	10	58965	10	81789	10	16195	5				
90	81777	5	16214	5	81790	5	16196	5				
100	81778	5	16215	5	81791	5	16197	5				
110	81779	5			81792	5	16198	5				
120	81780	5	16216	5	81793	5	16199	5				
130	81781	5			81794	5	16200	5				
140	81782	5			81795	5	16201	5				
150	81783	5			81796	5						
160	16187	5			16190	5	16202	5				
180	16188	5			16191	5						
200	16189	5										

*Full Thread



Metric Thread Pitches and
Wrench Sizes

Dia.	Coarse Pitch	Fine Pitch	Extra Fine Pitch	Wrench Size
M3	0.5	-	-	5.5mm
M4	0.7	0.5	-	7mm
M5	0.8	0.5	-	8mm
M6	1.0	0.75	-	10mm
M7	1.0	-	-	11mm
M8	1.25	1.0	0.75	13mm
M10	1.5	1.25	1.0	17mm
M12	1.75	1.5	1.25	19mm
M14	2.0	1.5	1.25	22mm
M16	2.0	1.5	-	24mm
M18	2.5	1.5	-	27mm
M20	2.5	2.0	1.5	30mm
M24	3.0	2.0	1.5	36mm



Available In Assortments

- LP239
(22 items, 1,120 pieces)
 - LP241
(24 items, 285 pieces)
 - LP242
(15 items, 183 pieces)
- See page 6-40

RELATED ITEMS

Threadloc
Medium Strength
Threadlocking Compound

Single component anaerobic threadlocking adhesive prevents loosening of threaded fasteners. Threadloc is a fast-cure compound that allows easy removal of fasteners with hand tools for servicing and preventive maintenance requirements. Threadloc eliminates loosening due to vibration and seals against potential leakage.

- For use with thru-hole and blind hole applications
- Temperature Range: -75°F to +300°F (-60°C to +149°C)
- Set time of 10 minutes on steel with a full cure time of 24 hours
- Shear strength 1,200 PSI on steel fasteners
- Prevents rusting of threads
- Chemical resistance to motor oil and gasoline

Description	Color	Part No.	Pkg. Qty.
15ml Bottle	Blue	87136	1
35ml Bottle	Blue	84774	1
75ml Bottle	Blue	87137	1

See pages 10-16 through 10-20 for our complete product offering.

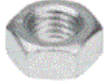




METRIC Fasteners

www.calgro.com.mx Tel.(33)3609-1649
ventas@calgro.com.mx

Metric Steel Nuts



Standard Hex Nuts – DIN 934

All Metal Locknuts – DIN 980V

Dia.	Class 10		Class 8				Class 10		Class 8							
	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Fine Part No.	Pkg. Qty.	X-Fine Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.	Fine Part No.	Pkg. Qty.	X-Fine Part No.	Pkg. Qty.
M3			82240	50							16278	50				
M4			4300	50							16279	50				
M5			4301	50							16280	50				
M6	10240	50	4302	50					87498	25	16281	50				
M7	87124	50	4303	50												
M8	10241	50	4304	50	80251	50			87500	25	16282	50	16290	50		
M10	10242	50	4305	50	80253	50	80252	50	87501	10	16283	50	16291	50	16295	50
M12	10243	25	80250	25	80255	50	80254	50	87502	10	16284	25	16292	25	16296	25
M14	61841	20	80911	20	99000	20			87503	5	16285	20	16293	20		
M16	61842	20	80912	20	99001	20			87504	5	16286	20	16294	20		
M18	86854	20	80913	20	99002	20			87505	3	16287	20				
M20	61843	10	80914	10					87506	3	16288	10				
M22			80915	10												
M24	86855	5	80916	10					87507	2	16289	10				



Coupling Nuts – DIN 6334



Nylon Insert Locknuts



Available In Assortment
LP751
(20 items, 560 pieces)
See page 6-33

Flange Locknuts

Dia.	Class 8			Standard Height – DIN 985 Class 8				High Nut – DIN 982 Class 8			Class 10		Class 8	
	Coarse Part No.	Pkg. Qty.		Coarse Part No.	Pkg. Qty.	Fine Part No.	Pkg. Qty.	X-Fine Part No.	Pkg. Qty.	Maximum Height (mm)	Coarse Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.
M3	60913	10		82265	50									
M4	60914	10		82266	50									
M5	60915	10		82267	50					5	61395	50		
M6	60916	10		82268	50					6	61396	50	18255	25
M7				82880	50								18251	50
M8	60917	10		82269	50	82276	50			8	61397	50	18256	25
M10	60918	10		82270	50	82278	50	82277	50	10	61398	50	18257	10
M12	60919	10		82271	25	82280	50	82279	50	12	61399	25	18258	10
M14	60920	10		82272	20	16309	20			14	61400	20	18254	25
M16	60921	5		82273	20	16310	20			16	61401	20		
M18	60922	5		82274	20					18	16276	10		
M20	60923	5		82275	10					20	61402	10		
M24	60924	5		16308	10					24	16277	10		



Hex Jam Nuts – DIN 439B



Wing Nuts

Dia.	Class 4				Class 5			
	Coarse Part No.	Pkg. Qty.	Fine Part No.	Pkg. Qty.	X-Fine Part No.	Pkg. Qty.	Coarse Part No.	Pkg. Qty.
M3	16297	50						
M4	16298	50					98165	25
M5	16299	50					98166	25
M6	16300	50					98167	25
M7	16301	50						
M8	82849	50	80256	50			98168	25
M10	82850	50	16306	50	80257	50	98169	25
M12	82851	50	80258	50	16307	50	98170	25
M14	16302	50	82557	20				
M16	82852	20	82558	20				
M18	16303	10	82559	10				
M20	16304	10	82560	10				
M24	16305	10						

Metric Thread Pitches and Wrench Sizes

Dia.	Coarse Pitch	Fine Pitch	Extra Fine Pitch	Wrench Size
M3	0.5	-	-	5.5mm
M4	0.7	0.5	-	7mm
M5	0.8	0.5	-	8mm
M6	1.0	0.75	-	10mm
M7	1.0	-	-	11mm
M8	1.25	1.0	0.75	13mm
M10	1.5	1.25	1.0	17mm
M12	1.75	1.5	1.25	19mm
M14	2.0	1.5	1.25	22mm
M16	2.0	1.5	-	24mm
M18	2.5	1.5	-	27mm
M20	2.5	1.5	1.0	30mm
M24	3.0	2.0	1.5	36mm



STAINLESS STEEL Fasteners

www.calgro.com.mx Tel.(33)3609-1649
ventas@calgro.com.mx

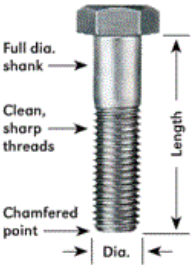
Stainless Steel
Hex Head Capscrews
Type 316

The use of stainless steel fasteners lengthens the life of equipment, reduces maintenance and repairs, and can prevent injury or death from product damage.

- Superior resistance to heat and corrosion compared to Type 304 or Type 18-8 steels
- A superior stainless steel for extreme temperatures: -460°F to +1,500°F (-273°C to +815°C)
- Non-magnetic
- Low electrical conductivity
- Longer life in acids, bases and seawater than Type 18-8 Stainless Steel
- Tensile strength: 100,000 PSI
- UNC coarse thread
- Used in the food, chemical, petroleum and other industries with high-corrosion environments
- Meets ANSI Specifications B18.2.1 and B1.1



Headmark for traceability
Metal type
Body dia.
Across flats
Premium cap screw head markings insure traceability. Metal type and body diameter are easy to read.



Available In Assortments

- Premium**
LP347 (24 items, 430 pieces)
LP637 (10 items, 325 pieces)
See page 6-40
- Premium**
LP638 (10 items, 325 pieces)
LP639 (10 items, 250 pieces)
LP640 (10 items, 95 pieces)
Standard
LP677 (24 items, 430 pieces)
See page 6-41

Dia. (Inches)	Across Flats (Inches)
1/4	7/16
5/16	1/2
3/8	9/16
7/16	5/8
1/2	3/4
5/8	15/16
3/4	1-1/8
7/8	1-5/16
1	1-1/2
1-1/8	1-11/16
1-1/4	1-7/8

Length (Inches)	Dia. 1/4-20			Dia. 5/16-18			Dia. 3/8-16			Dia. 7/16-14		
	Premium Part No.	Standard Part No.	Pkg. Qty.	Premium Part No.	Standard Part No.	Pkg. Qty.	Premium Part No.	Standard Part No.	Pkg. Qty.	Premium Part No.	Standard Part No.	Pkg. Qty.
1/2	81805*	63800	25	81813*	63818	25	81821*	63836	25			
5/8	91342*	63801	25	91343*	63819	25	91344*	63837	25			
3/4	81806*	63802	25	81814*	63820	25	81822*	63838	25			
7/8	51266*		25	51271*		25	51276*		25			
1	81807*	63803	25	81815*	63821	25	81823*	63839	25	81834*	63854	25
1-1/4	81808	63804	25	81816*	63822	25	81824*	63840	25	81835*	63855	25
1-1/2	81809	63805	25	81817	63823	25	81825	63841	25	81836*	63856	25
1-3/4	81810	63806	25	81818	63824	25	81826	63842	25	81837*		25
2	81811	63807	25	81819	63825	25	81827	63843	25	81838	63858	25
2-1/4	90982	63808	25	90987	63826	25	81828	63844	25	51230		10
2-1/2	81812	63809	25	81820	63827	25	81829	63845	25	81839	63859	10
2-3/4		63810	25		63828	25		63846	25			
3	87085	63811	25	87089	63829	25	81830	63847	25	81840	63860	10
3-1/2	90984	63812	25	90989	63830	10	81831	63848	10	51281		10
4	87086	63813	25	87090	63831	10	81832	63849	10	51282		10
4-1/2		90985	10		90990	10		90993	10	51283		10
5		87087	10		87091	10		87093	10	51236		10
5-1/2		90986	10		90991	10			10			
6		87088	10		87092	10		87094	10			
								87095	10			

*Full Thread

Length (Inches)	Dia. 1/2-13			Dia. 5/8-11			Dia. 3/4-10		Dia. 7/8-9		Dia. 1-8	
	Premium Part No.	Standard Part No.	Pkg. Qty.	Premium Part No.	Standard Part No.	Pkg. Qty.	Standard Part No.	Pkg. Qty.	Standard Part No.	Pkg. Qty.	Standard Part No.	Pkg. Qty.
3/4	51284*		10									
1	81842*	63861	10	81851*	63876	10						
1-1/4	81843*	63862	10	81852*	63877	10						
1-1/2	81844*	63863	10	81853*	63878	10	63891	5				
1-3/4	81845*	63864	10	90997*	63879	10	63892	5				
2	81846	63865	10	81854*	63880	10	63893	5	63904	3	63912	2
2-1/4	90994	63866	10	90998*	63881	10	63894	5				
2-1/2	81847	63867	10	81855	63882	10	63895	5	63905	3	63913	2
2-3/4		63868	10		63883	10	63896	5				
3	81848	63869	10	81856	63884	5	63897	5	63906	3	63914	2
3-1/2	81849	63870	10	81857	63885	5	63898	5	63907	3	63915	2
4	81850	63871	5	81858	63886	5	63899	5	63908	3	63916	2
4-1/2	90996	63872	5	91000	63887	5	63900	3	63909	3	63917	2
5	87096	63873	5	87099	63888	5	63901	3	63910	2	63918	2
5-1/2	87097	63874	5	87100	63889	3	63902	3			63919	2
6	87098	63875	5	87101	63890	3	63903	3	63911	2	63920	2

*Full Thread



Stainless Steel
Hex Nuts
Type 316



with Friction Control*

- UNC coarse thread
- Meets ASTM F-594

*Prevents seizing and galling

Size	Part No.	Pkg. Qty.
1/4-20	81867	50
5/16-18	81868	50
3/8-16	81869	25
7/16-14	81870	25
1/2-13	81871	10
5/8-11	81872	10
3/4-10	81873	5
7/8-9	87205	5
1-8	87206	3
1-1/8-7	51410	3
1-1/4-7	51411	3

Stainless Steel
Flat Washers
Type 316



Bolt Dia. (Inches)	Part No.	Pkg. Qty.
1/4	81874	50
5/16	81875	50
3/8	81876	25
7/16	81877	25
1/2	81878	10
5/8	81879	10
3/4	81880	5
7/8	87201	5
1	87202	5
1-1/8	51408	3
1-1/4	51409	3

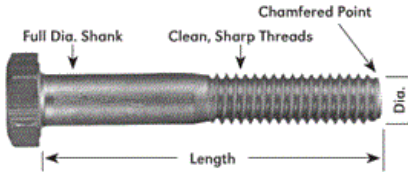
Stainless Steel
Lockwashers
Type 316



Bolt Dia. (Inches)	Part No.	Pkg. Qty.
1/4	81881	50
5/16	81882	50
3/8	81883	25
7/16	81884	25
1/2	81885	10
5/8	81886	10
3/4	81887	5
7/8	87203	5
1	87204	5
1-1/8	51412	3
1-1/4	51413	3

Stainless Steel Hex Head Capscrews
Type 18-8

- Non-magnetic
- Non-heat-treatable
- UNC coarse thread and UNF fine thread
- Good resistance to heat, cold and corrosion
- 80,000 PSI minimum



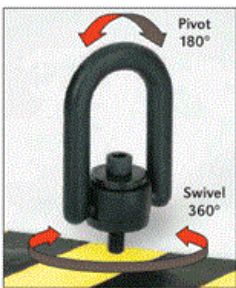
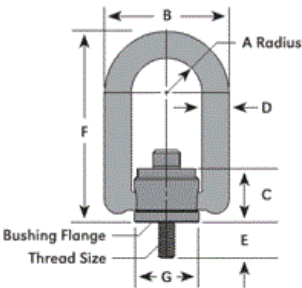
Length (Inches)	1/4-20 UNC Part No.	1/4-28 UNF Part No.	Pkg. Qty.	5/16-18 UNC Part No.	5/16-24 UNF Part No.	Pkg. Qty.	3/8-16 UNC Part No.	Pkg. Qty.	3/8-24 UNF Part No.	Pkg. Qty.	7/16-14 UNC Part No.	Pkg. Qty.	7/16-20 UNF Part No.	Pkg. Qty.
1/2	91006	96458	25	91023		25	91040	25						
5/8	91591		25	91592		25	91593	25						
3/4	91007	96459	25	91024	96464	25	91041	25						
1	91008	96460	25	91025	96465	25	91042	25	96471	25	51395	25	61434	25
1-1/4	91009	96461	25	91026	96466	25	91043	25			51396	25	61435	25
1-1/2	91010	96462	25	91027	96467	25	91044	25	96472	25	51397	25	61436	25
1-3/4	91011		25	91028		25	91045	25			51398	25		
2	91012	96463	25	91029	96468	25	91046	25	96473	25	51399	25	61437	25
2-1/4	91013		25	91030		25	91047	25			51400	10		
2-1/2	91014		25	91031	96469	25	91048	25	96474	25	51401	10	61438	25
2-3/4	91015		25	91032		25	91049	25			51402	10		
3	91016		25	91033	96470	25	91050	25	96475	25	51403	10	61439	25
3-1/2	91017		25	91034		25	91051	10			51404	10		
4	91018		25	91035		10	91052	10	96476	25	51405	10		
4-1/2	91019		10	91036		10	91053	10			51406	10		
5				91037		10	91054	10			51407	5		
5-1/2	91021		10	91038		10	91055	10						
6	91022		10	91039		10	91056	10						

Length (Inches)	1/2-13 UNC Part No.	Pkg. Qty.	1/2-20 UNF Part No.	Pkg. Qty.	5/8-11 UNC Part No.	Pkg. Qty.	5/8-18 UNF Part No.	Pkg. Qty.	3/4-10 UNC Part No.	Pkg. Qty.	7/8-9 UNC Part No.	Pkg. Qty.
1	91057	10	61440	25	91072	10	61450	10				
1-1/4	91058	10	61441	25	91073	10	61451	10				
1-1/2	91059	10	61442	25	91074	10	61452	10	91087	5		
1-3/4	91060	10	61443	25	91075	10	61453	10				
2	91061	10	61444	25	91076	10	61454	10	91089	5		
2-1/4	91062	10	61445	10	91077	10			91090	5		
2-1/2	91063	10	61446	10	91078	10	61455	10	91091	5		
2-3/4	91064	10			91079	5			91092	5		
3	91065	10	61447	10	91080	5	61456	10	91093	5	91761	3
3-1/2	91066	10	61448	10	91081	5			91094	5		
4	91067	5	61449	10	91082	5	61457	10	91095	5	91763	3
4-1/2	91068	5			91083	5			91096	5		
5	91069	5			91084	5			91097	3		
5-1/2	91070	5			91085	3			91098	3		
6	91071	5			91086	3			91099	3	91766	2



Heavy-Duty Hoist Rings

- Use Heavy-Duty Hoist Rings for added lifting safety to avoid eyebolt twisting, bending and breaking when lifting heavy, angular, unbalanced loads
- Hoist rings pivot and swivel to compensate for pitch, roll and sway when lifting unbalanced loads – pivots 180°, swivels 360°
- Minimum safety factor is 5:1
- Meets Military Specification MIL-STD 1365 (11) or MIL-STD 209



Thread Size	Working Load Limit (Lbs.)			Dimensions (Inches)							Recommended Torque Load (Ft./Lb.)	Part No.	Pkg Qty.
	Straight Pull	45° Lift	90° Lift	A Radius	B	C	D	E	F	G			
3/8-16	1,000	1,000	1,000	0.65	2.29	0.96	0.44	1.06	3.23	1.25	12	58655	1
1/2-13	2,500	2,500	2,500	1.00	3.50	1.50	0.75	1.00	5.31	1.89	28	58656	1
5/8-11	4,000	4,000	4,000	1.00	3.50	1.50	0.75	1.00	5.31	1.89	60	58657	1
3/4-10	5,000	5,000	5,000	1.00	3.50	1.50	0.75	1.00	5.31	1.89	100	58658	1
1-8	10,000	10,000	10,000	1.40	5.10	2.05	1.00	1.45	7.00	2.81	230	58659	1



Solid One-Piece Keyserts®

Thinwall Thread Repair Inserts, Kits and Installation Tools

- For thread repair requiring maximum reliability, high strength and ease of installation
- The most versatile inserts available – recommended for the majority of thread repair applications
- Each kit includes an installation tool, carbon steel inserts and complete installation instructions
- Install with standard drills and taps
- Keys lock insert in place, preventing insert from backing out
- No pre-winder tool required
- No troublesome tangs to break off
- May be used in aluminum, magnesium, cast iron, cold rolled steel, plastic, etc.
- Use in automobiles, buses, heavy equipment, machinery, marine equipment, power tools, recreational vehicles, small engines, tooling and trucks



Available In Assortments

LP248
(11 items, 86 pieces)

LP249
(11 items, 86 pieces)

See page 6-97

Internal Thread Size	External Thread Size	Length (Inches)	Inserts Per Kit	Recommended Drill Size	Recommended Tap Size	Kit Part No.	Pkg. Qty.	Replacement Insert Part No.	Pkg. Qty.	Replacement Installation Tool Part No.	Pkg. Qty.
10-24	5/16-18	0.31	9	1 (86484)	5/16-18 (60984)	89785	1	89797	10	28166	1
10-32	5/16-18	0.31	9	1 (86484)	5/16-18 (60984)	89791	1	89803	10	28166	1
1/4-20	3/8-16	0.37	8	Q (86492)	3/8-16 (60985)	89786	1	89798	10	28167	1
1/4-28	3/8-16	0.37	8	Q (86492)	3/8-16 (60985)	89792	1	89804	10	28167	1
5/16-18	7/16-14	0.43	7	X (86499)	7/16-14 (60986)	89787	1	89799	10	28168	1
5/16-24	7/16-14	0.43	7	X (86499)	7/16-14 (60986)	89793	1	89805	10	28168	1
3/8-16	1/2-13	0.50	6	29/64 (84746)	1/2-13 (60987)	89788	1	89800	10	28169	1
3/8-24	1/2-13	0.50	6	29/64 (84746)	1/2-13 (60987)	89794	1	89806	10	28169	1
7/16-14	9/16-12	0.56	6	33/64 (81031)	9/16-12 (60988)	89789	1	89801	10	28169	1
7/16-20	9/16-12	0.56	6	33/64 (81031)	9/16-12 (60988)	89795	1	89807	10	28169	1
1/2-13	5/8-11	0.62	4	37/64 (81033)	5/8-11 (60989)	89790	1	89802	10	28170	1
1/2-20	5/8-11	0.62	4	37/64 (81033)	5/8-11 (60989)	89796	1	89808	10	28170	1

Description	Part No.	Pkg. Qty.
1/4" - 1/2" UNC Thinwall Keysert® Thread Repair Kit	29429	1

Kit Contents

Insert Size	Insert No. (Qty.)	Installation Tool No. (Qty.)
1/4-20	89798 (12)	28167 (1)
5/16-18	89799 (12)	28168 (1)
3/8-16	89800 (12)	28169 (1)
1/2-13	89802 (6)	28170 (1)

Thinwall 303 Stainless Steel Inserts

Internal Thread Size	Part No.	Pkg. Qty.
10-24	60184	10
1/4-20	60185	10
5/16-18	60186	5
3/8-16	60187	5
7/16-14	60188	5
1/2-13	60189	2



CAUTION: Any cutting tool may break or shatter under improper use. Government regulations require use of safety glasses and other appropriate safety equipment at all times in the vicinity of use.



THREAD Repair

www.calgro.com.mx Tel.(33)3609-1649
ventas@calgro.com.mx

Solid One-Piece Keyserts®

Heavy-Duty Thread Repair Inserts, Kits and Installation Tools

- Recommended for use where higher strengths or larger sizes are required
- Each kit includes installation tool, carbon steel inserts and instruction sheet



Available In Assortments

LP246
(9 items, 65 pieces)

LP247
(9 items, 65 pieces)
See page 6-96



Internal Thread Size	External Thread Size	Insert Length (Inches)	Inserts Per Kit	Recommended Drill Size	Recommended Tap Size	Kit Part No.	Pkg. Qty.	Replacement Insert Part No.	Pkg. Qty.	Replacement Installation Tool Part No.	Pkg. Qty.
8-32	5/16-18	0.31	9	I (86484)	5/16-18 (60984)	89750	1	89773	10	89843	1
10-24	3/8-16	0.31	9	Q (86492)	3/8-16 (60985)	89739	1	89762	10	28166	1
10-32	3/8-16	0.31	9	Q (86492)	3/8-16 (60985)	89751	1	89774	10	28166	1
1/4-20	7/16-14	0.37	8	X (86499)	7/16-14 (60986)	89740	1	89763	10	28167	1
1/4-28	7/16-14	0.37	8	X (86499)	7/16-14 (60986)	89752	1	89775	10	28167	1
5/16-18	1/2-13	0.43	7	29/64 (84746)	1/2-13 (60987)	89741	1	89764	10	28168	1
5/16-24	1/2-13	0.43	7	29/64 (84746)	1/2-13 (60987)	89753	1	89776	10	28168	1
3/8-16	9/16-12	0.5	6	33/64 (81031)	9/16-12 (60988)	89742	1	89765	10	28169	1
3/8-24	9/16-12	0.5	6	33/64 (81031)	9/16-12 (60988)	89754	1	89777	10	28169	1
7/16-14	5/8-11	0.62	6	37/64 (81033)	5/8-11 (60989)	89743	1	89766	10	28169	1
7/16-20	5/8-11	0.62	6	37/64 (81033)	5/8-11 (60989)	89755	1	89778	10	28169	1
1/2-13	3/4-16	0.62	4	45/64 (89482)	3/4-16 (61003)	89744	1	89767	10	28170	1
1/2-20	3/4-16	0.62	4	45/64 (89482)	3/4-16 (61003)	89756	1	89779	10	28170	1
9/16-12	3/4-16	0.81	3	45/64 (89482)	3/4-16 (61003)	89745	1	89768	5	28170	1
9/16-18	3/4-16	0.81	3	45/64 (89482)	3/4-16 (61003)	89757	1	89780	5	28170	1
5/8-11	7/8-14	0.87	3	53/64 (89486)	7/8-14 (61004)	89746	1	89769	5	28171	1
5/8-18	7/8-14	0.87	3	53/64 (89486)	7/8-14 (61004)	89758	1	89781	5	28171	1
3/4-10	1-1/8-12	1.12	3	1-1/16 (55335)	1-1/8-12 (61007)	89747	1	89770	5	28172	1
3/4-16	1-1/8-12	1.12	3	1-1/16 (55335)	1-1/8-12 (61007)	89759	1	89782	5	28172	1
7/8-9	1-1/4-12	1.25	3	1-3/16 (55339)	1-1/4-12 (61008)	89748	1	89771	5	28172	1
7/8-14	1-1/4-12	1.25	3	1-3/16 (55339)	1-1/4-12 (61008)	89760	1	89783	5	28172	1
1-8	1-3/8-12	1.37	2	1-5/16 (55342)	1-3/8-12 (61009)	89749	1	89772	2	28173	1
1-12	1-3/8-12	1.37	2	1-5/16 (55342)	1-3/8-12 (61009)	89761	1	89784	2	28173	1
1-14	1-3/8-12	1.37	2	1-5/16 (55342)	1-3/8-12 (61009)	60213	1	97573	2	28173	1

Description	Part No.	Pkg. Qty.
1/4" - 1/2" UNC Heavy-Duty Keysert® Thread Repair Kit	29430	1

Heavy-Duty 303 Stainless Steel Inserts

Internal Thread Size	Insert Length (Inches)	Part No.	Pkg. Qty.
8-32	0.31	60190	10
10-24	0.31	60191	10
1/4-20	0.37	60192	10
5/16-18	0.43	60193	5
3/8-16	0.50	60194	5
7/16-14	0.62	60195	5
1/2-13	0.62	60196	2
9/16-12	0.81	60197	1
5/8-11	0.87	60198	1
3/4-10	1.12	60199	1
7/8-9	1.25	60200	1
1-8	1.37	60201	1

Kit Contents

Insert Size	Insert No. (Qty.)	Installation Tool No. (Qty.)
1/4-20	89763 (12)	28167 (1)
5/16-18	89764 (12)	28168 (1)
3/8-16	89765 (12)	28169 (1)
1/2-13	89767 (6)	28170 (1)



CAUTION: Any cutting tool may break or shatter under improper use. Government regulations require use of safety glasses and other appropriate safety equipment at all times in the vicinity of use.



Solid One-Piece Metric Keyserts®

Metric Thread Repair Inserts, Kits and Installation Tools

- For thread repairs requiring maximum reliability, high strength and ease of installation
- Install with standard drills and taps
- No pre-winder tool required
- Keys lock insert in place preventing insert from backing out
- Each kit includes an installation tool, metric carbon steel inserts and complete installation instructions



Internal Thread Size	External Thread Size	Insert Length (Inches)	Inserts Per Kit	Recommended Drill Size	Recommended Tap Size	Kit Part No.	Pkg. Qty.	Replacement Insert Part No.	Pkg. Qty.	Replacement Installation Tool Part No.	Pkg. Qty.
M5 x 0.8	M8 x 1.25	0.375	8	H (86483)	M8 x 1.25 (63448)	89809	1	89818	20	28166	1
M6 x 1.0	M10 x 1.25	0.394	8	S (86494)	M10 x 1.25 (63450)	89810	1	89819	20	28167	1
M8 x 1.0	M12 x 1.25	0.472	6	27/64 (84744)	M12 x 1.25 (63453)	89812	1	89821	15	28168	1
M8 x 1.25	M12 x 1.25	0.472	6	27/64 (84744)	M12 x 1.25 (63453)	89813	1	89822	15	28168	1
M10 x 1.25	M14 x 1.5	0.551	4	1/2 (84749)	M14 x 1.5 (63456)	89814	1	89823	10	28169	1
M10 x 1.5	M14 x 1.5	0.551	4	1/2 (84749)	M14 x 1.5 (63456)	89815	1	89824	10	28169	1
M12 x 1.25	M16 x 1.5	0.630	3	37/64 (81033)	M16 x 1.5 (63458)	89816	1	89825	10	28170	1
M12 x 1.75	M16 x 1.5	0.630	3	37/64 (81033)	M16 x 1.5 (63458)	89817	1	89826	10	28170	1

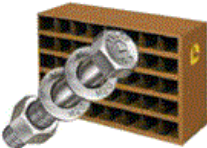
Metric 303 Stainless Steel Inserts

Internal Thread Size	Insert Length (mm)	Part No.	Pkg. Qty.
M5 x 0.8	8	60202	2
M6 x 1.0	10	60203	2
M8 x 1.0	12	60204	2
M8 x 1.25	12	60205	2
M10 x 1.25	14	60206	2
M10 x 1.5	14	60207	2
M12 x 1.25	16	60208	2
M12 x 1.75	16	60209	2



RELATED ITEMS

Lawson Metric Capscrew Assortments



MT605A Metri-12 Fastening System
See page 6-35



LP554 Metri-12 Capscrews
See page 6-36



LP241 Metric Capscrews
See page 6-40



THREAD Repair

www.calgro.com.mx Tel.(33)3609-1649 ventas@calgro.com.mx

Supertanium® Threaded Inserts and Installation Tools

- Positive mechanical locking pins prevent back-out – even under stress and vibration
- Repairs threads in all metals including aluminum and brass
- Strong enough to use with all grades of capscrews
- Easy installation using standard drills and taps
- Bolt length is not critical



- Thread insert material: Thinwall Stainless Steel – No. 10 – 1/2", M5 – M12; Heavy-Duty Stainless Steel – 8-32, 9/16" – 7/8", M14 – M24; Heavy-Duty Carbon Steel – 1" – 1-1/2"

UNC

Internal Thread Size	External Thread Size	Length (Inches)	Recommended Drill Size	Recommended Tap Size	Installation Tool Part No.	Pkg. Qty.	Insert Part No.	Pkg. Qty.
8-32	5/16-18	5/16	I	5/16-18	P33620	1	P34817	5
10-24	5/16-18	5/16	I	5/16-18	P33621	1	P33597	5
1/4-20	3/8-16	3/8	Q	3/8-16	P33622	1	P33666	5
5/16-18	7/16-14	7/16	X	7/16-14	P33623	1	P33762	5
3/8-16	1/2-13	1/2	29/64	1/2-13	P33624	1	P33788	5
7/16-14	9/16-12	9/16	33/64	9/16-12	P33625	1	P34302	5
1/2-13	5/8-11	5/8	37/64	5/8-11	P33626	1	P34307	5
9/16-12	3/4-16	13/16	45/64	3/4-16	P33627	1	P35513	2
5/8-11	7/8-14	7/8	53/64	7/8-14	P33628	1	P34327	2
3/4-10	1-1/8-12	1-1/8	1-1/16	1-1/8-12	P33629	1	P34646	2
7/8-9	1-1/4-12	1-1/4	1-3/16	1-1/4-12	P33630	1	P56264	2
1-8	1-3/8-12	1-3/8	1-5/16	1-3/8-12	P33631	1	P56270	2
1-1/8-7	1-1/2-12	1-5/8	1-7/16	1-1/2-12			P56246	1
1-1/4-7	1-5/8-12	1-3/16	1-9/16	1-5/8-12			P56252	1
1-1/2-6	1-7/8-12	2	1-13/16	1-7/8-12			P56258	1

UNF

Internal Thread Size	External Thread Size	Length (Inches)	Recommended Drill Size	Recommended Tap Size	Installation Tool Part No.	Pkg. Qty.	Insert Part No.	Pkg. Qty.
10-32	5/16-18	5/16	I	5/16-18	P33621	1	P34843	5
1/4-28	3/8-16	3/8	Q	3/8-16	P33622	1	P38187	5
5/16-24	7/16-14	7/16	X	7/16-14	P33623	1	P38197	5
3/8-24	1/2-13	1/2	29/64	1/2-13	P33624	1	P38252	5
7/16-20	9/16-12	9/16	33/64	9/16-12	P33625	1	P38282	5
1/2-20	5/8-11	5/8	37/64	5/8-11	P33626	1	P38288	5
9/16-18	3/4-16	13/16	45/64	3/4-16	P33627	1	P35582	2
5/8-18	7/8-14	3/4	53/64	7/8-14	P33628	1	P38292	2
3/4-16	1-1/8-12	1-1/8	1-1/16	1-1/8-12	P33629	1	P38297	2
7/8-14	1-1/4-12	1-1/4	1-3/16	1-1/4-12	P33630	1	P56267	2
1-12	1-3/8-12	1-3/8	1-5/16	1-3/8-12	P33631	1	P56273	2
1-14	1-3/8-12	1-3/8	1-5/16	1-3/8-12	P33631	1	P56276	2
1-1/8-12	1-1/2-12	1-5/8	1-7/16	1-1/2-12			P56249	1
1-1/4-12	1-5/8-12	1-13/16	1-9/16	1-5/8-12			P56255	1
1-1/2-12	1-7/8-12	2	1-13/16	1-7/8-12			P56261	1

Metric/Fractional (Stainless Steel)

Internal Thread Size	External Thread Size	Length (Inches)	Recommended Drill Size	Recommended Tap Size	Part No.	Pkg. Qty.
M5 x 0.8	5/16-18	0.310	I	5/16-18	P56215	5
M6 x 1.0	3/8-16	0.310	Q	3/8-16	P56217	5
M8 x 1.25	7/16-14	0.430	X	7/16-14	P56218	5
M10 x 1.5	1/2-13	0.500	29/64	1/2-13	P56220	5
M12 x 1.75	5/8-11	0.620	37/64	5/8-11	P56224	5
M16 x 2.0	7/8-14	0.870	53/64	7/8-14	P56226	2
M20 x 2.5	1-1/8-12	1.125	1-1/16	1-1/8-12	P56229	1
M24 x 3.0	1-3/8-12	1.370	1-5/16	1-3/8-12	P56233	1

Metric (Stainless Steel)

Internal Thread Size	External Thread Size	Length (mm)	Recommended Drill Size	Recommended Tap Size	Part No.	Pkg. Qty.
M5 x 0.8	M8 x 1.25	8.0	H	M8 x 1.25	P35942	5
M6 x 1.0	M10 x 1.25	10.0	S	M10 x 1.25	P35971	5
M8 x 1.25	M12 x 1.25	12.0	27/64	M12 x 1.25	P35979	5
M10 x 1.5	M14 x 1.5	14.0	1/2	M14 x 1.5	P36012	5
M12 x 1.75	M16 x 1.5	16.0	37/64	M16 x 1.5	P36098	5
M14 x 2.0	M20 x 1.5	20.0	47/64	M20 x 1.5	P56225	2
M16 x 2.0	M22 x 1.5	22.0	51/64	M22 x 1.5	P56228	2
M20 x 2.5	M30 x 2.0	30.0	1-3/32	M30 x 2.0	P56231	1
M24 x 3.0	M33 x 2.0	33.0	1-7/32	M33 x 2.0	P56234	1



Fix-A-Thred® Inserts and Kits

- Helically-wound thread repair – universally accepted and most cost-effective method of thread repair
- Manufactured from precision cold-formed 18-8 (Type 304) stainless steel
- Kits contain tap, insertion tool, inserts and instructions, and are packaged in a sturdy and convenient storage box
- Tensile strength of at least 200,000 PSI
- Wide effective temperature range: -275°F to +774°F (-170°C to +412°C)
- Inserts compensate for pitch and angle errors and share the load over more of the thread for stronger assemblies



Size	Recommended Drill Size	Inserts Per Kit	Kit Part No.	Pkg. Qty.	Replacement Insert Part No.	Pkg. Qty.	Replacement Tap Part No.	Pkg. Qty.
2-56	3/32 (84723)	10	61220	1	61226	25	61324**	1
3-48	No. 36 (80464)	10	61221	1	61227	25	61325**	1
4-40	No. 31 (80459)	10	61222	1	61228	25	61326**	1
5-40	No. 29 (80457)	10	61223	1	61229	25	61327**	1
6-32	No. 25 (80453)	10	61224	1	61230	25	61328**	1
8-32	11/64 (84728)	10	61225	1	61231	25	61329*	1
10-24	13/64 (84730)	10	53822	1	53779	25	61330*	1
10-32	13/64 (84730)	10	53833	1	53790	25	61341*	1
1/4-20	17/64 (84734)	10	53823	1	53780	25	61331*	1
1/4-28	17/64 (84734)	10	53834	1	53791	25	61342*	1
5/16-18	21/64 (84738)	10	53824	1	53781	25	61332*	1
5/16-24	21/64 (84738)	10	53835	1	53792	25	61343*	1
3/8-16	25/64 (84742)	10	53825	1	53782	25	61333*	1
3/8-24	25/64 (84742)	10	53836	1	53793	25	61344*	1
7/16-14	29/64 (84746)	5	53826	1	53783	25	61334*	1
7/16-20	29/64 (84746)	5	53837	1	53794	25	61345*	1
1/2-13	17/32 (81032)	5	53827	1	53784	10	61335*	1
1/2-20	33/64 (81031)	5	53838	1	53795	10	61346*	1
9/16-12	19/32 (81034)	5	53828	1	53785	10	61336*	1
9/16-18	37/64 (81033)	5	53839	1	53796	10	61347*	1
5/8-11	21/32 (81036)	5	53829	1	53786	10	61337*	1
5/8-18	41/64 (81035)	5	53840	1	53797	10	61348*	1
3/4-10	25/32 (81038)	5	53830	1	53787	5	61338*	1
3/4-16	49/64 (81037)	5	53841	1	53798	5	61349*	1
7/8-9	29/32 (81041)	5	53831	1	53788	5	61339**	1
7/8-14	57/64 (81040)	5	53842	1	53799	5	61350**	1
1-8	1-1/32 (55334)	5	53832	1	53789	5	61340**	1
1-14	1-1/64 (21751)	5	53843	1	53800	5	61351**	1
M5-0.8	13/64 (84730)	10	53844	1	53801	25	61352*	1
M6-1.0	1/4 (84733)	10	53845	1	53802	25	61353*	1
M7-1.0	9/32 (84735)	10	53846	1	53803	25	61354*	1
M8-1.25	21/64 (84738)	10	53847	1	53804	25	61355*	1
M10-1.25	13/32 (92655)	10	53854	1	53811	25	61356*	1
M10-1.5	13/32 (92655)	10	53848	1	53805	25	61357*	1
M12-1.5	31/64 (84748)	5	53855	1	53812	25	61358*	1
M12-1.75	31/64 (84748)	5	53849	1	53806	25	61359*	1
M14-1.5	9/16 (9740)	5	53856	1	53813	25	61360*	1
M14-2.0	37/64 (81033)	5	53850	1	53807	25	61361*	1
M16-1.5	21/32 (81036)	5	53857	1	53814	10	61362*	1
M16-2.0	21/32 (81036)	5	53851	1	53808	10	61363**	1
M18-2.5	47/64 (89484)	5	53852	1	53809	10	61364*	1
M20-2.5	13/16 (9744)	5	53853	1	53810	5	61365*	1

*Carbon steel **High-speed steel

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