



DIEMAKERS' SUPPLIES

◆ Inch & Metric Products



www.danly.com

DIEMAKERS' SUPPLIES

Service We Deliver and Quality You Can Depend On

DANLY IEM, a division of Connell Limited Partnership, is a leading manufacturer of die sets and die component products supplied globally to the parts forming industry. Backed by years of tool and die experience, quality and innovation are some of the reasons why our name is respected throughout the world. We have taken the lead role in creating and bringing new products to customers and helping them find solutions that improve their operations. Based on the capabilities **DANLY IEM** offers, we can help you to meet the demands of quick deliveries, technical support, quality products and competitive prices. **DANLY IEM** and its' broad distribution channels and direct sales personnel will assist you in any way to make your product a better and more profitable one.

Whether you purchase on-line or in person, you will receive the same reliable service **DANLY IEM** is known for. We understand the demanding schedules of die builders and production personnel and have developed efficient manufacturing processes to shorten product lead times as well as put inventory on our shelves so you can have it in your facility when you need it. Put the **DANLY IEM** network to work for you. We've got the service you've been looking for.

Included in our full line offering are both inch and metric size die sets and die components that are designed to numerous die standards including ISO, NAAMS, JIS and many large automotive and appliance manufacturers' standards. The complete product offering includes:

- Ball bearing and friction style die sets including custom and catalog sets
- Machined plate
- Guide posts & bushings
- ISO and JIS Die springs
- In-die tapping units for both mechanical and hydraulic presses
- Formathane™ Urethane springs, strippers, sheets, bars, rods and die cover film
- Diemakers' supplies such as pry bars, dowel pins, hoist rings, clamps and fasteners
- Standard and self-lubricating wear product including wear plate, wear strips, gibs, keeper plates and guide blocks
- Cam units, including Milfab®, Mini™, Aerial and Die Mount styles
- Accubend™ Rotary Benders
- Standard and Ball lock punches and retainers
- Coil Safe
- Air presses
- Pad retainers
- Nitrogen gas springs



Our facility has been Registered by Underwriters Laboratories, Inc. to the International Organization for Standardization ISO 9001 Series Standards for Quality.
"Registered by UL to ISO 9001."

CONTENTS

	PAGE NUMBER
Dowel Pins	
Inch	1
Metric	2
Lifter Pins	3
Gold Bond Fasteners	
T-Slot Bolts	4
Hex Head Bolts	5
Offset Clamps	6
Straight Clamps	6
Goose Neck Clamps	7
T-Nuts	7
Heavy Hex Nuts	8
Swivel Nuts	8
Flat Washers	9
Swivel Washers	9
Hoist Rings	
Center Pull	10
Side Pull	11
Button Head Cap Screws	12
Flat Head Cap Screws	13
Socket Head Cap Screws	
Inch	14
Metric	16
Socket Head Stripper Bolts	
Inch	18
Metric	19
Hex Keys	
Inch	20
Metric	21
Pry Bars & Accessories	22
Die Lubrication	22



CONTENTS

	PAGE NUMBER
Deburring Tools	23
Layout Fluid	24
Steel Stamps	25
Punch Shanks	26
Stock Pusher	27
Pad Retainers	
Inch	28
Metric	29
Reverse Mount Pad Retainers	
Inch	30
Metric	31
Roller Stock Guides	32
Stop Blocks	33



Dowel Pins – Inch



Product Features

Precision dowel pins are made of high grade steel, hardened and precision ground for accuracy. The hard surface of the dowel pins allow them to be used in close fitting holes without expansion. The taper at the lead end and the radius of the driving end facilitate the use of the pins. All pins are inspected to assure uniform hardness, quality and dimensions.

These dowel pins are ground .0002" over the listed diameter to tolerances of $\pm .0001$."



7-0808-1, 7-1212-1 & 7-2016-1

Part Number	Diameter (in)	Length (in)
7-0406-1	1/8	3/8
7-0408-1		1/2
7-0410-1		5/8
7-0412-1		3/4
7-0414-1		7/8
7-0416-1		1
7-0420-1		1-1/4
7-0424-1		1-1/2
7-0428-1		1-3/4
7-0432-1		2
7-0608-1	3/16	1/2
7-0610-1		5/8
7-0612-1		3/4
7-0614-1		7/8
7-0616-1		1
7-0620-1		1-1/4
7-0624-1		1-1/2
7-0628-1		1-3/4
7-0632-1		2
7-0808-1	1/4	1/2
7-0810-1		5/8
7-0812-1		3/4
7-0814-1		7/8
7-0816-1		1
7-0820-1		1-1/4
7-0824-1		1-1/2
7-0828-1		1-3/4
7-0832-1		2
7-0836-1		2-1/4
7-0840-1		2-1/2

Part Number	Diameter (in)	Length (in)
7-1008-1	5/16	1/2
7-1010-1		5/8
7-1012-1		3/4
7-1014-1		7/8
7-1016-1		1
7-1020-1		1-1/4
7-1024-1		1-1/2
7-1028-1		1-3/4
7-1032-1		2
7-1036-1		2-1/4
7-1040-1		2-1/2
7-1048-1		3
7-1208-1	3/8	1/2
7-1210-1		5/8
7-1212-1		3/4
7-1214-1		7/8
7-1216-1		1
7-1220-1		1-1/4
7-1224-1		1-1/2
7-1228-1		1-3/4
7-1232-1		2
7-1236-1		2-1/4
7-1240-1		2-1/2
7-1248-1		3
7-1416-1	7/16	1
7-1420-1		1-1/4
7-1424-1		1-1/2
7-1428-1		1-3/4
7-1432-1		2
7-1440-1		2-1/2

Part Number	Diameter (in)	Length (in)
7-1448-1	7/16	3
7-1612-1	1/2	3/4
7-1616-1		1
7-1620-1		1-1/4
7-1624-1		1-1/2
7-1628-1		1-3/4
7-1632-1		2
7-1636-1		2-1/4
7-1640-1		2-1/2
7-1648-1		3
7-1656-1		3-1/2
7-1664-1		4
7-2016-1	5/8	1
7-2020-1		1-1/4
7-2024-1		1-1/2
7-2028-1		1-3/4
7-2032-1		2
7-2036-1		2-1/4
7-2040-1		2-1/2
7-2048-1		3
7-2056-1		3-1/2
7-2064-1		4
7-2432-1	3/4	2
7-2440-1		2-1/2
7-2448-1		3
7-2456-1		3-1/2
7-2464-1		4
7-2832-1	7/8	2
7-2848-1		3
7-2864-1		4

Dowel Pins – Metric



Product Features

Precision dowel pins are made of high grade steel, hardened and precision ground for accuracy. The hard surface of the dowel pins allow them to be used in close fitting holes without expansion. The taper at the lead end and the radius of the driving end facilitate the use of the pins. All pins are inspected to assure uniform hardness, quality and dimensions.

Part Number	Diameter (mm)	Length (mm)
7-03010-9	3	10
7-03012-9		12
7-03016-9		16
7-03020-9		20
7-03025-9		25
7-04010-9	4	10
7-04012-9		12
7-04016-9		16
7-04020-9		20
7-04025-9		25
7-04030-9		30
7-05012-9	5	12
7-05016-9		16
7-05020-9		20
7-05025-9		25
7-05030-9		30
7-05040-9		40
7-05045-9		45
7-06016-9	6	16
7-06020-9		20
7-06025-9		25

Part Number	Diameter (mm)	Length (mm)
7-06030-9	6	30
7-06040-9		40
7-06045-9		45
7-06050-9		50
7-06060-9		60
7-08020-9	8	20
7-08030-9		30
7-08040-9		40
7-08045-9		45
7-08050-9		50
7-08060-9		60
7-10020-9	10	20
7-10030-9		30
7-10040-9		40
7-10045-9		45
7-10050-9		50
7-12030-9	12	30
7-12040-9		40
7-12045-9		45
7-12050-9		50
7-12090-9		90

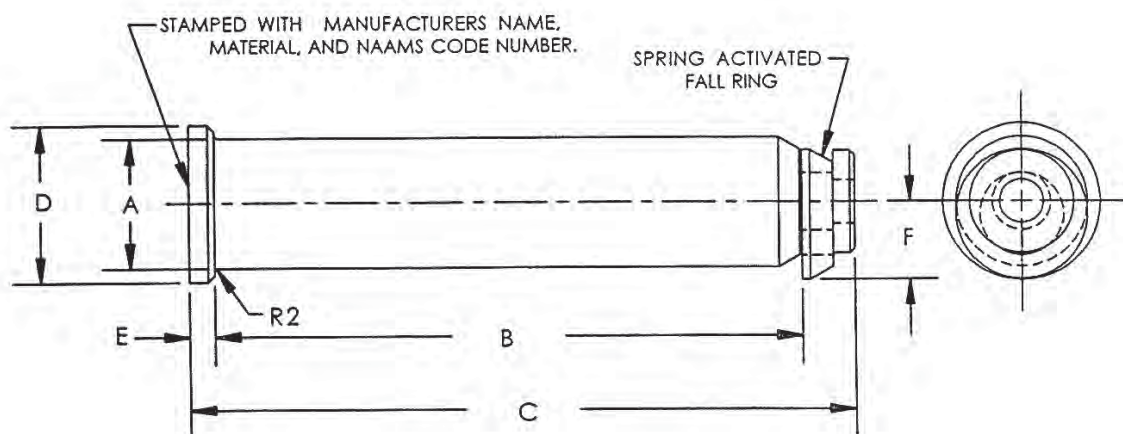


Lifter Pins – Metric

Product Features

Lifter pins are manufactured from 1144 steel and are commonly used to handle large die sets. They conform to NAAMS standards.

The internal spring provides added assurance that the fall ring will function properly during the course of the pin's use.



Part Number	NAAMS Code	A ⁺⁰ A _{-.03} (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	Total Die Wt. in Metric Tons (t)
LP35-125	L013512	35	125	165	45	10	21.5	0 – 2.72
LP50-190	L015019	50	190	230	63	10	31	2.72 – 9.07
LP63-280	L016328	63	280	320	76	10	37.5	9.07 – 36.28
LP80-320	L018032	80	320	370	89	15	46	36.28 – 72.57



Gold Bond Fasteners – T-Slot Bolts

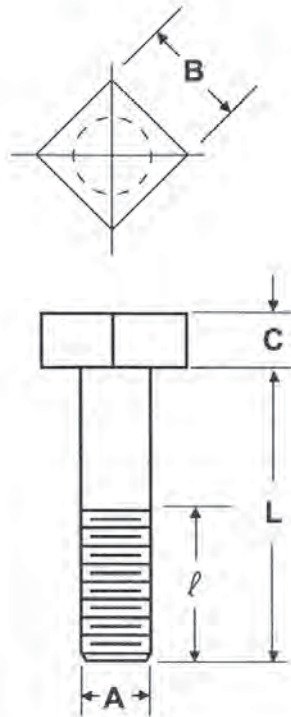


Product Features

Gold Bond Press Room bolts are forged and utilize heat treated alloy steel. Forging provides extra strength by eliminating the weakness often found at the joint of head and shaft in machined bolts. The alloy steel is heat treated for a minimum tensile strength of 150,000 psi and a hardness of 302-352 BHN (33-39 RC).

Gold Bond bolts conform to or exceed current SAE-J-429 Grade 8 requirements and specifications of SAE-5-123. The threads are National Coarse - Class 2A.

Zinc plating protects against rust and corrosion. The gold finish identifies Gold Bond. These bolts are the superior press room bolt.



Part Number	Thread Size Dia. A (in)	L (in)	B (in)	C (in)	ℓ (in)
9-0511-621	5/8 – 11	2.75	1-1/8	13/32	1.75
9-0512-621		3.00			2.00
9-0514-621		3.50			2.50
9-0516-621		4.00			2.50
9-0520-621		5.00			3.50
9-0528-621		7.00			5.50
9-0612-621	3/4 – 10	3.00	1-5/16	17/32	2.00
9-0613-621		3.25			2.25
9-0614-621		3.50			2.50
9-0616-621		4.00			2.50
9-0620-621		5.00			3.50
9-0628-621		7.00			5.50
9-0636-621		9.00			4.50
9-0814-621	1 – 8	3.50	1-11/16	23/32	2.50
9-0816-621		4.00			3.00
9-0818-621		4.50			3.50
9-0820-621		5.00			4.00
9-0824-621		6.00			4.00
9-0828-621		7.00			4.00
9-0832-621		8.00			4.00
9-0836-621		9.00			4.00
9-0844-621		11.00			5.00
9-0852-621		13.00			5.00
9-0862-621		15.50			5.00
9-0872-621		18.00			5.00
9-0882-621		20.50			5.00

Gold Bond Fasteners – Hex Head Bolts

Product Features

Gold Bond Press Room bolts are forged and utilize heat treated alloy steel. Forging provides extra strength by eliminating the weakness often found at the joint of head and shaft in machined bolts. The alloy steel is heat treated for a minimum tensile strength of 150,000 psi and a hardness of 302-352 BHN (33-39 RC).

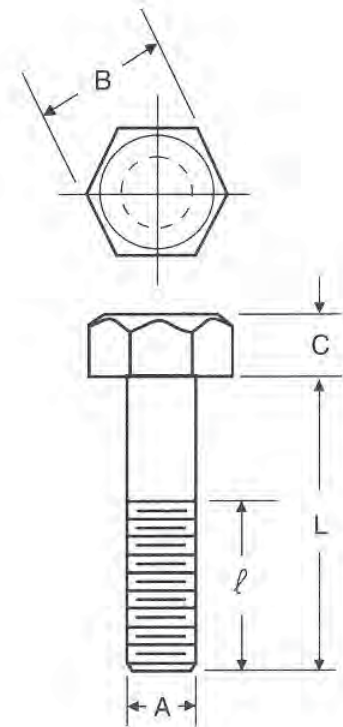
Gold Bond bolts conform to or exceed current SAE-J-429 Grade 8 requirements and specifications of SAE-5-123. The threads are National Coarse - Class 2A.

Zinc plating protects against rust and corrosion. The gold finish identifies Gold Bond. These bolts are the superior press room bolt.



9-0628-721

Part Number	Thread Size Dia. A (in)	L (in)	B (in)	C (in)	ℓ (in)
9-0612-721	3/4 – 10	3.00	1-1/4	1/2	2.00
9-0614-721		3.50			2.50
9-0616-721		4.00			3.00
9-0618-721		4.50			2.50
9-0620-721		5.00			3.00
9-0624-721		6.00			4.00
9-0628-721		7.00			3.50
9-0632-721		8.00			3.50
9-0640-721		10.00			5.50
9-0812-721	1 – 8	3.00	1-5/8	7/8	2.50
9-0814-721		3.50			3.00
9-0816-721		4.00			2.50
9-0820-721		5.00			2.50
9-0824-721		6.00			3.50
9-0826-721		6.50			3.00
9-0828-721		7.00			3.50
9-0830-721		7.50			3.50
9-0832-721		8.00			4.00
9-0840-721		10.00			5.00



Gold Bond Fasteners – Offset Clamps



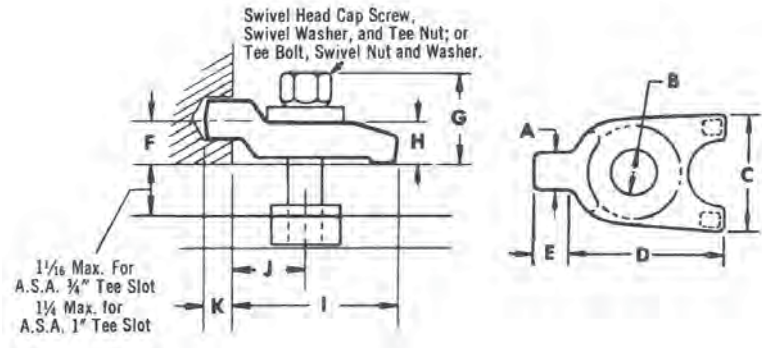
9-06-301



Product Features

These forged, carbon steel clamps are designed to permit moving the clamping bolt close to the clamped object. The offset construction provides ample room for the slot to pass over the head of the clamping bolt. The clamps are zinc plated for rust resistance and have a gold colored finish.

MOUNTING ASSEMBLY DRAWING

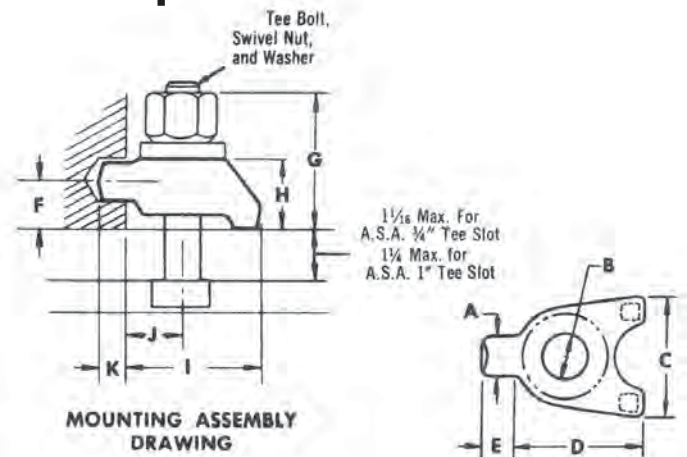


Part Number	Bolt Size (in)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	I (in)	J (in)	K (in)
9-06-301	5/8 or 3/4	3/4	7/8	2-1/4	3	5/8	7/8	1-3/4	13/16	3	1-1/4	5/8
9-07-301	1	3/4	1-1/8	2-1/2	3-5/8	5/8	7/8	2	15/16	3 5/8	1-9/16	5/8

Gold Bond Fasteners – Straight Clamps

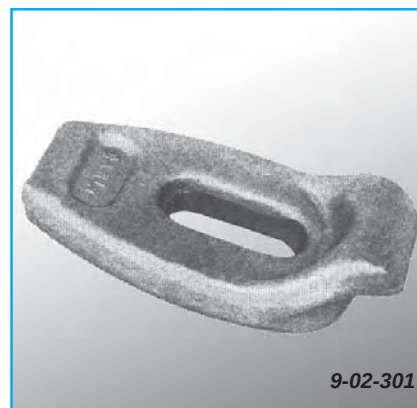
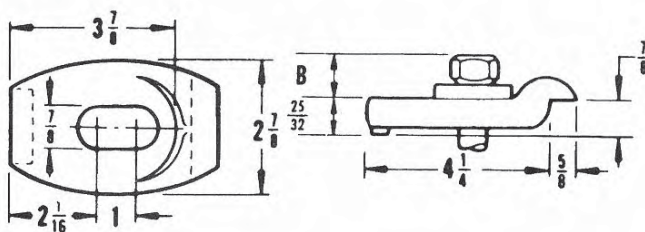


9-03-301



Part Number	Bolt Size (in)	A (in)	B (in)	C (in)	D (in)	E (in)	F (in)	G (in)	H (in)	I (in)	J (in)	K (in)
9-03-301	5/8 or 3/4	3/4	7/8	2-1/4	2-1/2	5/8	7/8	2-3/8	1-5/16	2-1/2	1	5/8
9-04-301	1	3/4	1-1/8	2-3/8	3	5/8	7/8	2-3/4	1-5/16	3	1-1/4	5/8

Gold Bond Fasteners – Goose Neck Clamps



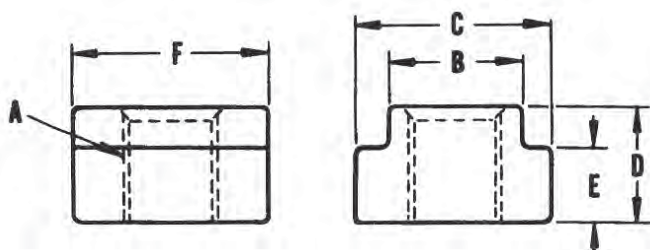
Part Number	Bolt
9-02-301	5/8 or 3/4



Gold Bond Fasteners – T-Nuts

Product Features

These T-Nuts are manufactured from material meeting SAE Grade 5. In addition, they are hardened to 302-352 BHN (33-39 RC). Sizes conform to ASA standards for use in 3/4" and 1" T-Slots.



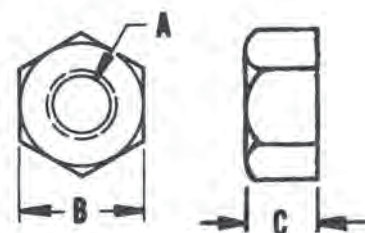
Part Number	Slot Size	A	B	C	D	E	F
9-0511-661	3/4	5/8 – 11	25/32	1-5/16	25/32	17/32	1-5/16
9-0610-661	1	3/4 – 10	1-1/32	1-11/16	1	11/16	1-11/16

Gold Bond Fasteners – Heavy Hex Nuts



Product Features

These heavy hex nuts are manufactured from heat-treated, high-strength alloy steel and zinc plated for rust and corrosion protection.



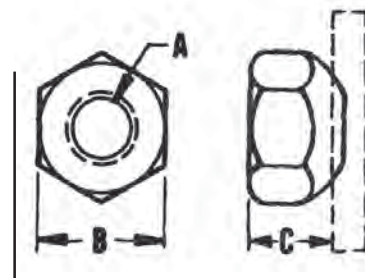
Part Number	Grade	A	B	C
9-0511-681	GRADE 5	5/8 – 11	1-1/16	5/8
9-0610-781	GRADE 8	3/4 – 10	1-1/4	3/4
9-0808-781	GRADE 8	1 – 8	1-5/8	1

Gold Bond Fasteners – Swivel Nuts



Product Features

These swivel nuts are manufactured from heat-treated, high-strength alloy steel and zinc plated for rust and corrosion protection.



Part Number	A	B	C
9-0511-691	5/8 – 11	1-1/16	11/16
9-0610-691	3/4 – 10	1-1/4	13/16
9-0808-691	1 – 8	1-5/8	1-1/16



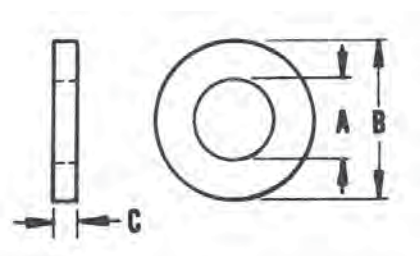
Gold Bond Fasteners – Flat Washers

Product Features

These flat washers are manufactured from heat-treated, high-strength alloy steel and zinc plated for rust and corrosion protection.



9-0613-711



Part Number	Nominal Size	A	B	C
9-0511-711	5/8	11/16	1-1/2	3/16
9-0613-711	3/4	13/16	1-3/4	1/4
9-0817-711	1	1-1/16	2-1/4	5/16

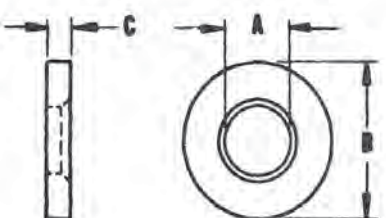
Gold Bond Fasteners – Swivel Washers

Product Features

These swivel washers are manufactured from heat-treated, high-strength alloy steel and zinc plated for rust and corrosion protection



9-01-501



Part Number	Nominal Size	A	B	C
9-01-501	5/8	25/32	1-7/8	5/16
9-02-501	3/4	29/32	1-7/8	3/8
9-05-501	1	1-3/16	2-1/4	3/8

Hoist Rings – Center Pull

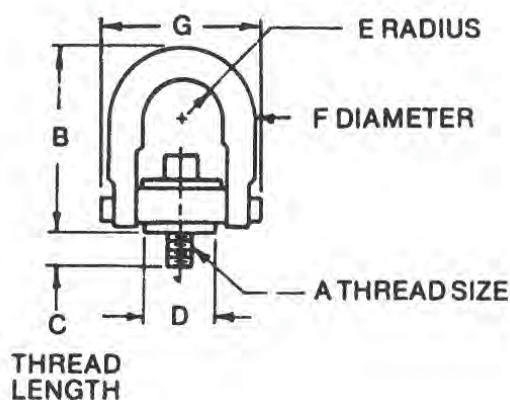


9-0109-88



Product Features

Center pull hoist rings are manufactured from 4140 and have a black oxide finish. The washer is gold iridite. The clevis bolt, pins, base, washer and bushing are magnetic particle inspected.



Thread Size A	Load Capacity* (lbs)	STANDARD CLEVIS		LONG CLEVIS		Thread Length C	D	Radius E	Diam. F	G	Torque ¹ (lb.ft.)
		Part Number	B	Part Number	B						
5/16 – 18	800	9-0109-88	2.67	–	–	9/16	.75	.43	.38	1.84	7
3/8 – 16	1000	0-0309-88	2.67	–	–	9/16	.75	.43	.38	1.84	12
1/2 – 13	2500	0-0417-88	3.75	–	–	1-1/16	1.20	.69	.50	2.56	28
		0-0412-88	4.78	9-0412-89	6.72	3/4	1.50	.88	.75	3.52	28
		9-0416-88	4.78	9-0416-89	6.72	1	1.50	.88	.75	3.52	28
		9-0420-88	4.78	9-0420-89	6.72	1-1/4	1.50	.88	.75	3.52	28
5/8 – 11	4000	9-0516-88	4.78	9-0516-89	6.72	1	1.50	.88	.75	3.52	60
		9-0520-88	4.78	9-0520-89	6.72	1-1/4	1.50	.88	.75	3.52	60
3/4 – 10	5000	9-0616-88	4.78	9-0616-89	6.72	1	1.50	.88	.75	3.52	100
		9-0624-88	4.78	9-0624-89	6.72	1-1/4	1.50	.88	.75	3.52	100
	7000	9-0616-881	6.52	9-0616-891	8.11	1	2.31	1.40	1.00	5.14	100
		9-0624-881	6.52	9-0624-891	8.11	1-1/2	2.31	1.40	1.00	5.14	100
7/8 – 9	8000	9-0716-88	6.52	9-0716-89	8.11	1	2.31	1.40	1.00	5.14	160
1 – 8	10000	9-0820-88	6.52	9-0820-89	8.11	1-1/4	2.31	1.40	1.00	5.14	230
		9-0824-88	6.52	9-0824-89	8.11	1-1/2	2.31	1.40	1.00	5.14	230
		9-0836-88	6.52	9-0836-89	8.11	2-1/4	2.31	1.40	1.00	5.14	230
1-1/4 – 7	15000	9-1030-88	8.73	–	–	1-7/8	3.19	1.75	1.25	6.50	470
1-1/2 – 6	24000	9-1244-88	12.47	–	–	2-3/4	4.19	2.25	1.75	8.55	800
2 – 4-1/2	30000	9-1650-88	12.47	–	–	3-1/8	4.19	2.25	1.75	8.55	800

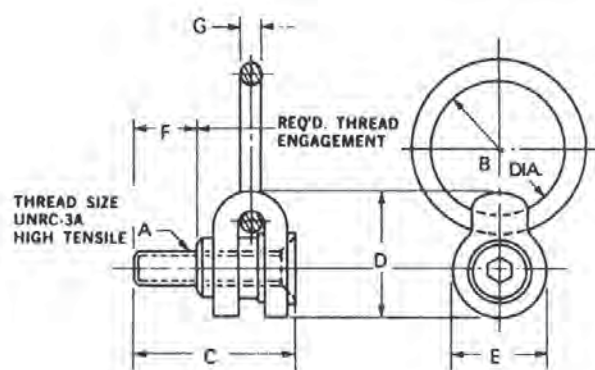
¹ Stated load capacity based on specific thread torques as shown in chart. It is recommended that these torques be used when installing hoist rings.

* Rated at 5:1 strength factor.

Hoist Rings – Side Pull

Product Features

Side pull hoist rings are manufactured from alloy steel and have a black oxide finish. The clevis, ring, bushing and cap screw are magnetic particle inspected. The clevis is x-rayed.



Part Number	Load Capacity*	A	B	C	D	E	F	G	Thread Torque ¹
9-01-87	650	5/16 – 18	2	2-1/8	2	1-1/2	5/8	3/8	3.5
9-03-87	800	3/8 – 16	2	2-3/8	2	1-1/2	3/4	3/8	4.5
9-04-87	1800	1/2 – 13	3	3-3/8	3-3/16	2-3/8	1	5/8	15.0
9-05-87	2500	5/8 – 11	3	3-5/8	3-3/16	2-3/8	1-1/4	5/8	25.0
9-06-87	4100	3/4 – 10	4	5	5	3-3/4	1-1/2	1	50.0
9-08-87	7100	1 – 8	4	5-3/8	5	3-3/4	2	1	90.0
9-10-87	14000	1-1/4 – 7	6	6-7/8	6-13/16	4-5/8	2	1-3/8	150.0
9-12-87	17200	1-1/2 – 6	6	7-7/8	6-13/16	4-5/8	2-1/2	1-3/8	250.0
9-16-87	29000	2 – 4-1/2	5-1/4 x 10-1/2	10	6-13/16	4-5/8	3-1/8	1-1/2	300.0

¹ Stated load capacity based on specific thread torques as shown in chart. It is recommended that these torques be used when installing hoist rings.

* Rated at 5:1 strength factor.

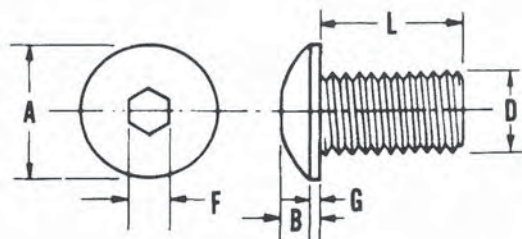


Button Head Socket Cap Screws



Product Features

Button head socket cap screws are manufactured from alloy steel and heat treated. The result is a finished product with close tolerances and fully formed threads for the Unified Class 3A fit.



ADDITIONAL DATA

Diam. D	Threads per Inch NC	Head Diam. A	Head Height B	Lip Height C	Size Hex Hole F
#4	40	.213	.059	.015	1/16
#6	32	.262	.073	.015	5/64
#8	32	.312	.087	.015	3/32
#10	24	.361	.101	.020	1/8
1/4	20	.437	.132	.031	5/32
5/16	18	.547	.166	.031	3/16
3/8	16	.656	.199	.031	7/32
1/2	13	.875	.265	.046	5/16
5/8	11	1.000	.331	.062	3/8

Part Number	Length L (in)	Diameter D (in)	Thread Pitch
9-0402-49	1/4	#4 0.112	NC
9-0403-49	3/8		
9-0404-49	1/2		
9-0502-49	1/4	#6 0.138	NC
9-0503-49	3/8		
9-0504-49	1/2		
9-0505-49	5/8	#8 0.164	NC
9-0602-49	1/4		
9-0603-49	3/8		
9-0604-49	1/2		
9-0605-49	5/8	#10 0.190	NC
9-0606-49	3/4		
9-0702-49	1/4		
9-0703-49	3/8		
9-0704-49	1/2	1/4	NC
9-0705-49	5/8		
9-0706-49	3/4		
9-0707-49	7/8		
9-0708-49	1	5/16	NC
9-0803-49	3/8		
9-0804-49	1/2		
9-0805-49	5/8		
9-0806-49	3/4	3/8	NC
9-0807-49	7/8		
9-0808-49	1		
9-1003-49	3/8		
9-1004-49	1/2	1/2	NC
9-1005-49	5/8		
9-1006-49	3/4		
9-1007-49	7/8		
9-1008-49	1	5/8	NC
9-1204-49	1/2		
9-1205-49	5/8		
9-1206-49	3/4		
9-1207-49	7/8	1	NC
9-1208-49	1		
9-1210-49	1-1/4		
9-1608-49	1		
9-1610-49	1-1/4	2	NC
9-1612-49	1-1/2		
9-1616-49	2		
9-2010-49	1-1/4		
9-2012-49	1-1/2	5/8	NC
9-2016-49	2		

Flat Head Socket Cap Screws

Product Features

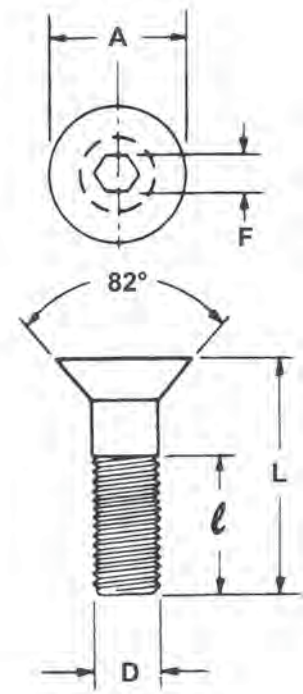
Flat head socket cap screws are manufactured from alloy steel and heat treated. The result is a finished product with close tolerances and fully formed threads for the Unified Class 3A fit.



9-2010, 9-1214 & 9-0706-44

Part Number	Length L (in)	Diameter D (in)	Thread Pitch
9-0302-44	1/4	#4 0.112	NC
9-0303-44	3/8		
9-0304-44	1/2		
9-0305-44	5/8		
9-0306-44	3/4	#5 0.125	NC
9-0402-44	1/4		
9-0403-44	3/8		
9-0404-44	1/2		
9-0405-44	5/8	#6 0.138	NC
9-0406-44	3/4		
9-0502-44	1/4		
9-0503-44	3/8		
9-0504-44	1/2	#8 0.164	NC
9-0505-44	5/8		
9-0506-44	3/4		
9-0603-44	3/8		
9-0604-44	1/2	#10 0.190	NC
9-0605-44	5/8		
9-0606-44	3/4		
9-0608-44	1		
9-0703-44	3/8	1/4	NC
9-0704-44	1/2		
9-0705-44	5/8		
9-0706-44	3/4		
9-0708-44	1	5/16	NC
9-0710-44	1-1/4		
9-0712-44	1-1/2		
9-0803-44	3/8		
9-0804-44	1/2	3/4	NC
9-0805-44	5/8		
9-0806-44	3/4		
9-0808-44	1		
9-0810-44	1-1/4	5/8	NC
9-0812-44	1-1/2		
9-0814-44	1-3/4		
9-0816-44	2		
9-1004-44	1/2	3/4	NC
9-1005-44	5/8		
9-1006-44	3/4		
9-1008-44	1		
9-1010-44	1-1/4	5/8	NC
9-1012-44	1-1/2		
9-1014-44	1-3/4		

Part Number	Length L (in)	Diameter D (in)	Thread Pitch
9-1016-44	2	5/16	NC
9-1018-44	2-1/4		
9-1020-44	2-1/2		
9-1204-44	1/2		
9-1205-44	5/8	3/8	NC
9-1206-44	3/4		
9-1208-44	1		
9-1210-44	1-1/4		
9-1212-44	1-1/2	7/16	NC
9-1214-44	1-3/4		
9-1216-44	2		
9-1218-44	2-1/4		
9-1220-44	2-1/2	1/2	NC
9-1224-44	3		
9-1406-44	3/4		
9-1408-44	1		
9-1410-44	1-1/4	5/8	NC
9-1412-44	1-1/2		
9-1414-44	1-3/4		
9-1416-44	2		
9-1606-44	3/4	3/4	NC
9-1608-44	1		
9-1610-44	1-1/4		
9-1612-44	1-1/2		
9-1614-44	1-3/4	5/8	NC
9-1616-44	2		
9-1618-44	2-1/4		
9-1620-44	2-1/2		
9-1624-44	3	5/8	NC
9-2010-44	1-1/4		
9-2012-44	1-1/2		
9-2014-44	1-3/4		
9-2016-44	2	3/4	NC
9-2018-44	2-1/4		
9-2020-44	2-1/2		
9-2024-44	3		
9-2410-44	1-1/4	3/4	NC
9-2412-44	1-1/2		
9-2414-44	1-3/4		
9-2416-44	2		
9-2418-44	2-1/4	5/8	NC
9-2420-44	2-1/2		
9-2424-44	3		



ADDITIONAL DATA

Diam. D	Threads per Inch NC	Head Diam. A	Size Hex Hole F
#4	40	.225	1/16
#5	40	.281	5/64
#6	32	.307	5/64
#8	32	.359	3/32
#10	24	.411	1/8
1/4	20	.531	5/32
5/16	18	.656	3/16
3/8	16	.781	7/32
7/16	14	.844	1/4
1/2	13	.937	5/16
5/8	11	1.188	3/8
3/4	10	1.438	3/8

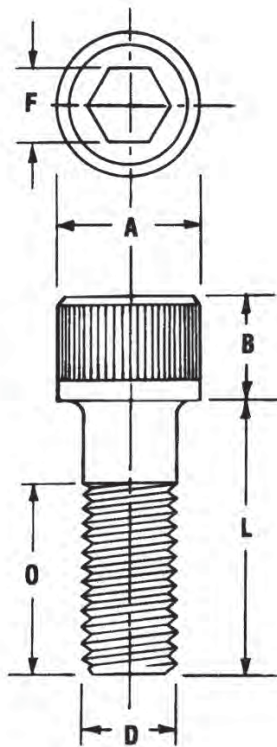
Socket Head Cap Screws – Inch



Product Features

Socket cap screws are manufactured from alloy steel and heat treated. The result is a finished product with close tolerances and fully formed threads for the Unified Class 3A fit.

Knurled heads provide positive finger gripping and speed up assembly. The accurate hex socket provides positive, non-slip internal wrenching.



Part Number	Length L (in)	Diameter D (in)	Thread Pitch
9-0302-41	1/4	#4 .112	NC
9-0303-41	3/8		NC
9-0304-41	1/2		NC
9-0305-41	5/8		NC
9-0306-41	3/4		NC
9-0402-41	1/4	#5 .125	NC
9-0403-41	3/8		NC
9-0404-41	1/2		NC
9-0405-41	5/8		NC
9-0406-41	3/4		NC
9-0502-41	1/4	#6 .138	NC
9-0502-411	1/4		NF
9-0503-41	3/8		NC
9-0503-411	3/8		NF
9-0504-41	1/2		NC
9-0504-411	1/2		NF
9-0505-41	5/8		NC
9-0505-411	5/8		NF
9-0506-41	3/4		NC
9-0506-411	3/4		NF
9-0507-41	7/8	#8 .164	NC
9-0508-41	1		NC
9-0602-41	1/4		NC
9-0603-41	3/8		NC
9-0604-41	1/2		NC
9-0604-411	1/2		NF
9-0605-41	5/8		NC
9-0606-41	3/4		NC
9-0606-411	3/4		NF
9-0607-41	7/8		NC
9-0608-41	1	#10 .190	NC
9-0610-41	1-1/4		NC
9-0612-41	1-1/2		NC
9-0703-41	3/8		NC
9-0703-411	3/8		NF
9-0704-41	1/2		NC
9-0704-411	1/2		NF
9-0705-41	5/8		NC
9-0705-411	5/8		NF
9-0706-41	3/4		NC
9-0706-411	3/4		NF
9-0707-41	7/8	#10 .190	NC
9-0707-411	7/8		NF

Part Number	Length L (in)	Diameter D (in)	Thread Pitch
9-0708-41	1	#10 .190	NC
9-0708-411	1		NF
9-0710-41	1-1/4		NC
9-0710-411	1-1/4		NF
9-0712-41	1-1/2		NC
9-0712-411	1-1/2	1/4	NF
9-0714-41	1-3/4		NC
9-0714-411	1-3/4		NF
9-0716-41	2		NC
9-0716-411	2		NF
9-0803-41	3/8	1/4	NC
9-0803-411	3/8		NF
9-0804-41	1/2		NC
9-0804-411	1/2		NF
9-0805-41	5/8		NC
9-0805-411	5/8		NF
9-0806-41	3/4		NC
9-0806-411	3/4		NF
9-0807-41	7/8		NC
9-0807-411	7/8		NF
9-0808-41	1	5/16	NC
9-0808-411	1		NF
9-0810-41	1-1/4		NC
9-0810-411	1-1/4		NF
9-0812-41	1-1/2		NC
9-0812-411	1-1/2		NF
9-0814-41	1-3/4		NC
9-0814-411	1-3/4		NF
9-0816-41	2		NC
9-0816-411	2		NF
9-0818-41	2-1/4	5/16	NC
9-0818-411	2-1/4		NF
9-0820-41	2-1/2		NC
9-0822-41	2-3/4		NC
9-0824-41	3		NC
9-1003-41	3/8		NC
9-1004-41	1/2		NC
9-1004-411	1/2		NF
9-1005-41	5/8		NC
9-1005-411	5/8		NF
9-1006-41	3/4	5/16	NC
9-1006-411	3/4		NF
9-1007-41	7/8		NC
9-1007-411	7/8		NF

Socket Head Cap Screws – Inch



Part Number	Length L (in)	Diameter D (in)	Thread Pitch	Part Number	Length L (in)	Diameter D (in)	Thread Pitch	Part Number	Length L (in)	Diameter D (in)	Thread Pitch
9-1008-41	1	5/16	NC	9-1414-41	1-3/4	7/16	NC	9-2028-41	3-1/2	5/8	NC
9-1008-411	1		NF	9-1416-41	2		NC	9-2032-41	4		NC
9-1010-41	1-1/4		NC	9-1416-411	2		NF	9-2036-41	4-1/2		NC
9-1010-411	1-1/4		NF	9-1418-41	2-1/4		NC	9-2040-41	5		NC
9-1012-41	1-1/2		NC	9-1420-411	2-1/2		NC	9-2044-41	5-1/2		NC
9-1012-411	1-1/2		NF	9-1422-41	2-3/4		NC	9-2048-41	6		NC
9-1014-41	1-3/4		NC	9-1424-41	3		NC	9-2052-41	6-1/2		NC
9-1014-411	1-3/4		NF	9-1426-41	3-1/4		NC	9-2056-41	7		NC
9-1016-41	2		NC	9-1428-41	3-1/2		NC	9-2064-41	8		NC
9-1016-411	2		NF	9-1432-41	4	1/2	NC	9-2410-41	1-1/4	3/4	NC
9-1018-41	2-1/4		NC	9-1604-41	1/2		NC	9-2412-41	1-1/2		NC
9-1018-411	2-1/4		NF	9-1605-41	5/8		NC	9-2414-41	1-3/4		NC
9-1020-41	2-1/2		NC	9-1606-41	3/4		NC	9-2416-41	2		NC
9-1020-411	2-1/2		NF	9-1607-41	7/8		NC	9-2418-41	2-1/4		NC
9-1022-41	2-3/4		NC	9-1608-41	1		NC	9-2420-41	2-1/2		NC
9-1024-41	3		NC	9-1608-411	1		NF	9-2422-41	2-3/4		NC
9-1026-41	3-1/4		NC	9-1610-41	1-1/4		NC	9-2424-41	3		NC
9-1028-41	3-1/2		NC	9-1610-411	1-1/4		NF	9-2426-41	3-1/4		NC
9-1204-41	1/2	3/8	NC	9-1612-41	1-1/2		NC	9-2428-41	3-1/2		NC
9-1204-411	1/2		NF	9-1612-411	1/2		NF	9-2432-41	4		NC
9-1205-41	5/8		NC	9-1614-41	1-3/4		NC	9-2436-41	4-1/2		NC
9-1205-411	5/8		NF	9-1614-411	1-3/4		NF	9-2440-41	5		NC
9-1206-41	3/4		NC	9-1616-41	2		NC	9-2444-41	5-1/2		NC
9-1206-411	3/4		NF	9-1616-411	2		NF	9-2448-41	6		NC
9-1207-41	7/8		NC	9-1618-41	2-1/4		NC	9-2452-41	6-1/2		NC
9-1207-411	7/8		NF	9-1618-411	2-1/4		NF	9-2456-41	7		NC
9-1208-41	1		NC	9-1620-41	2-1/2		NC	9-2464-41	8		NC
9-1208-411	1		NF	9-1620-411	2-1/2		NF	9-2816-41	2	7/8	NC
9-1210-41	1-1/4		NC	9-1622-41	2-3/4		NC	9-2818-41	2-1/4		NC
9-1210-411	1-1/4		NF	9-1622-411	3		NF	9-2820-41	2-1/2		NC
9-1212-41	1-1/2		NC	9-1624-41	3		NC	9-2822-41	2-3/4		NC
9-1212-411	1-1/2		NF	9-1624-411	8		NF	9-2824-41	3		NC
9-1214-41	1-3/4		NC	9-1626-41	3-1/4		NC	9-2826-41	3-1/4		NC
9-1214-411	1-3/4		NF	9-1628-41	3-1/2		NC	9-2828-41	3-1/2		NC
9-1216-41	2		NC	9-1632-41	4		NC	9-2832-41	4		NC
9-1216-411	2		NF	9-1636-41	4-1/2		NC	9-2836-41	4-1/2		NC
9-1218-41	2-1/4		NC	9-1640-41	5		NC	9-2840-41	5		NC
9-1218-411	2-1/4		NF	9-1644-41	5-1/2		NC	9-2844-41	5-1/2		NC
9-1220-41	2-1/2		NC	9-1648-41	6		NC	9-2848-41	6		NC
9-1220-411	2-1/2		NF	9-1652-41	6-1/2		NC	9-2852-41	6-1/2	1	NC
9-1222-41	2-3/4		NC	9-1656-41	7		NC	9-2856-41	7		NC
9-1224-41	3		NC	9-1664-41	8		NC	9-2864-41	8		NC
9-1224-411	3		NF	9-2008-41	1	5/8	NC	9-3216-41	2		NC
9-1226-41	3-1/4		NC	9-2008-411	1		NF	9-3218-41	2-1/4		NC
9-1228-41	3-1/2		NC	9-2010-41	1-1/4		NC	9-3220-41	2-1/2		NC
9-1232-41	4		NC	9-2010-411	1-1/4		NF	9-3222-41	2-3/4		NC
9-1236-41	4-1/2		NC	9-2012-41	1-1/2		NC	9-3224-41	3		NC
9-1240-41	5		NC	9-2012-411	1/2		NF	9-3226-41	3-1/4		NC
9-1404-41	1/2	7/16	NC	9-2014-41	1-3/4		NC	9-3228-41	3-1/2		NC
9-1405-41	5/8		NC	9-2014-411	1-3/4		NF	9-3232-41	4		NC
9-1406-41	3/4		NC	9-2016-41	2		NC	9-3236-41	4-1/2		NC
9-1407-41	7/8		NC	9-2016-411	2		NF	9-3240-41	5		NC
9-1408-41	1		NC	9-2018-41	2-1/4		NC	9-3244-41	5-1/2		NC
9-1408-411	1		NF	9-2020-41	2-1/2		NC	9-3248-41	6		NC
9-1410-41	1-1/4		NC	9-2020-411	2-1/2		NF	9-3252-41	6-1/2		NC
9-1410-411	1-1/4		NF	9-2022-41	2-3/4		NC	9-3256-41	7		NC
9-1412-41	1-1/2	7/16	NC	9-2024-41	3		NC	9-3264-41	8		NC
9-1412-411	1-1/2		NF	9-2026-41	3-1/4		NC				

Socket Head Cap Screws – Metric

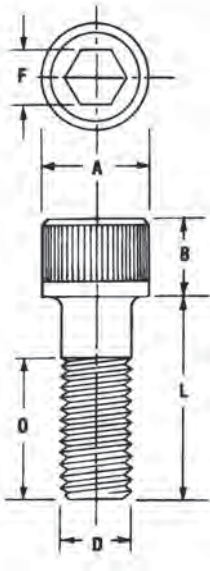


9-08110-91, 9-06060-91 & 9-02006-91

Product Features

Socket cap screws are manufactured from alloy steel and heat treated. The result is a finished product with close tolerances and fully formed threads for the Unified Class 3A fit.

All sizes listed are standard in American National Coarse Thread. Knurled heads provide positive finger gripping and speed up assembly. The accurate hex socket provides positive, non-slip internal wrenching.



Part Number	Grade	Length L (mm)	Diameter D (mm)	Thread Pitch
9-03005-91	12.9	5	3	0.50
9-03006-91		6		
9-03008-91		8		
9-03010-91		10		
9-03012-91		12		
9-03016-91		16		
9-03020-91		20		
9-03025-91		25		
9-03030-91		30		
9-03035-91		35		
9-04005-91	12.9	5	4	0.70
9-04006-91		6		
9-04008-91		8		
9-04010-91		10		
9-04012-91		12		
9-04016-91		16		
9-04020-91		20		
9-04025-91		25		
9-04030-91		30		
9-04035-91		35		
9-04040-91		40		
9-04045-91		45		
9-04050-91		50		
9-05006-91	12.9	6	5	0.80
9-05008-91		8		
9-05010-91		10		
9-05012-91		12		
9-05016-91		16		
9-05020-91		20		
9-05025-91		25		
9-05030-91		30		
9-05035-91		35		
9-05040-91		40		
9-05045-91		45		
9-05050-91		50		
9-05055-91		55		
9-05060-91		60		
9-05065-91		65		
9-05070-91		70		
9-06008-91	12.9	8	6	1.00
9-06010-91		10		
9-06012-91		12		
9-06016-91		16		

Part Number	Grade	Length L (mm)	Diameter D (mm)	Thread Pitch
9-06020-91	12.9	20	6	1.00
9-06025-91		25		
9-06030-91		30		
9-06035-91		35		
9-06040-91		40		
9-06045-91		45		
9-06050-91		50		
9-06055-91		55		
9-06060-91		60		
9-06065-91		65		
9-06070-91		70		
9-06075-91		75		
9-06080-91		80		
9-06090-91		90		
9-06100-91		100		
9-06110-91		110		
9-08010-91	12.9	10	8	1.25
9-08012-91		12		
9-08016-91		16		
9-08020-91		20		
9-08025-91		25		
9-08030-91		30		
9-08035-91		35		
9-08040-91		40		
9-08045-91		45		
9-08050-91		50		
9-08055-91		55		
9-08060-91		60		
9-08065-91		65		
9-08070-91		70		
9-08080-91		80		
9-08090-91		90		
9-08100-91		100		
9-08110-91		110		
9-08120-91		120		
9-08130-91		130		
9-08140-91		140		
9-10010-91	12.9	10	10	1.50
9-10012-91		12		
9-10016-91		16		
9-10020-91		20		
9-10025-91		25		
9-10030-91		30		

Socket Head Cap Screws – Metric

Part Number	Grade	Length L (mm)	Diameter D (mm)	Thread Pitch
9-10035-91	12.9	35	10	1.5
9-10040-91		40		
9-10045-91		45		
9-10050-91		50		
9-10055-91		55		
9-10060-91		60		
9-10065-91		65		
9-10070-91		70		
9-10075-91		75		
9-10080-91		80		
9-10090-91		90		
9-10100-91		100		
9-10110-91		110		
9-10120-91		120		
9-10130-91		130		
9-10140-91		140		
9-10150-91		150		
9-10160-91		160		
9-12016-91	12.9	16	12	1.75
9-12020-91		20		
9-12025-91		25		
9-12030-91		30		
9-12035-91		35		
9-12040-91		40		
9-12045-91		45		
9-12050-91		50		
9-12055-91		55		
9-12060-91		60		
9-12065-91		65		
9-12070-91		70		
9-12075-91		75		
9-12080-91		80		
9-12090-91		90		
9-12100-91		100		
9-12110-91		110		
9-12120-91		120		
9-12130-91		130		
9-12140-91		140		
9-12150-91		150		
9-12160-91		160		
9-12180-91		180		
9-12200-91		200		
9-16030-91	12.9	30	16	2.00
9-16035-91		35		
9-16040-91		40		
9-16045-91		45		
9-16050-91		50		
9-16055-91		55		
9-16060-91		60		
9-16065-91		65		
9-16070-91		70		

Part Number	Grade	Length L (mm)	Diameter D (mm)	Thread Pitch
9-16075-91	12.9	75	16	2.00
9-16080-91		80		
9-16090-91		90		
9-16100-91		100		
9-16110-91		110		
9-16120-91		120		
9-16130-91		130		
9-16140-91		140		
9-16150-91		150		
9-16160-91		160		
9-16180-91		180		
9-16200-91		200		
9-20030-91	12.9	30	20	2.50
9-20035-91		35		
9-20040-91		40		
9-20045-91		45		
9-20050-91		50		
9-20055-91		55		
9-20060-91		60		
9-20065-91		65		
9-20070-91		70		
9-20075-91		75		
9-20080-91		80		
9-20090-91		90		
9-20100-91		100		
9-20110-91		110		
9-20120-91		120		
9-20130-91		130		
9-20140-91		140		
9-20150-91		150		
9-20160-91		160		
9-20180-91		180		
9-20200-91		200		
9-24040-91	12.9	40	24	3.00
9-24050-91		50		
9-24055-91		55		
9-24060-91		60		
9-24065-91		65		
9-24070-91		70		
9-24075-91		75		
9-24080-91		80		
9-24090-91		90		
9-24100-91		100		
9-24110-91		110		
9-24120-91		120		
9-24130-91		130		
9-24140-91		140		
9-24150-91		150		
9-24160-91		160		
9-24180-91		180		
9-24200-91		200		



Socket Head Stripper Bolts – Inch

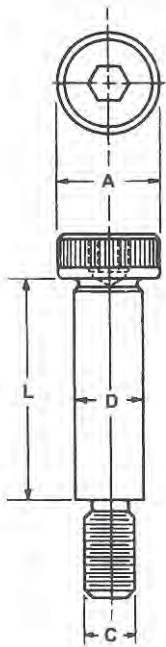


9-1030, 0814 & 0412-56

Product Features

Socket head stripper bolts (shoulder screws) are manufactured to close tolerances specifically for tool and die work. They are made from alloy steel that is heat-treated for additional strength. The final product has close tolerances and fully formed threads for the United Class 3A fit.

The knurled heads makes for sure finger grips that allow for fast assembly. The accurate hex socket provides for non-slip internal wrenching.



Part Number	Diam. D (in)	Length L (in)	Thread Pitch	A	C	Part Number	Diam. D (in)	Length L (in)	Thread Pitch	A	C
9-0403-56	1/4	3/8	NC	3/8	#10	9-0824-56	1/2	3	NC	3/4	3/8
9-0404-56		1/2				9-0826-56		3-1/4			
9-0405-56		5/8				9-0828-56		3-1/2			
9-0406-56		3/4				9-0830-56		3-3/4			
9-0408-56		1				9-0832-56		4			
9-0410-56		1-1/4				9-0834-56		4-1/4			
9-0412-56	5/16	1-1/2	NC	7/16	1/4	9-0836-56		4-1/2	NC	7/8	1/2
9-0503-56		3/8				9-0838-56		4-3/4			
9-0504-56		1/2				9-0840-56		5			
9-0505-56		5/8				9-1010-56	5/8	1-1/4			
9-0506-56		3/4				9-1012-56		1-1/2			
9-0508-56		1				9-1014-56		1-3/4			
9-0510-56	3/8	1-1/4	NC	9/16	5/16	9-1016-56		2	NC	1.0	5/8
9-0512-56		1-1/2				9-1018-56		2-1/4			
9-0514-56		1-3/4				9-1020-56		2-1/2			
9-0516-56		2				9-1022-56		2-3/4			
9-0603-56		3/8				9-1024-56		3			
9-0604-56		1/2				9-1026-56		3-1/4			
9-0605-56	1/2	5/8	NC	3/4	3/8	9-1028-56	3/4	3-1/2	NC	1.0	5/8
9-0606-56		3/4				9-1030-56		3-3/4			
9-0608-56		1				9-1032-56		4			
9-0610-56		1-1/4				9-1034-56		4-1/4			
9-0612-56		1-1/2				9-1036-56		4-1/2			
9-0614-56		1-3/4				9-1038-56		4-3/4			
9-0616-56	3/4	2	NC	1.0	5/8	9-1040-56	1.0	5	NC	1.0	5/8
9-0618-56		2-1/4				9-1044-56		5-1/2			
9-0620-56		2-1/2				9-1048-56		6			
9-0622-56		2-3/4				9-1212-56	3/4	1-1/2			
9-0624-56		3				9-1214-56		1-3/4			
9-0626-56		3-1/4				9-1216-56		2			
9-0628-56	1/2	3-1/2	NC	3/4	3/8	9-1218-56		2-1/4			
9-0630-56		3-3/4				9-1220-56		2-1/2			
9-0632-56		4				9-1222-56		2-3/4			
9-0804-56		1/2				9-1224-56		3			
9-0805-56		5/8				9-1226-56		3-1/4			
9-0806-56		3/4				9-1228-56		3-1/2			
9-0808-56	3/4	1	NC	1.0	5/8	9-1230-56	1.0	3-3/4			
9-0810-56		1-1/4				9-1232-56		4			
9-0812-56		1-1/2				9-1234-56		4-1/4			
9-0814-56		1-3/4				9-1236-56		4-1/2			
9-0816-56		2				9-1238-56		4-3/4			
9-0818-56		2-1/4				9-1240-56		5			
9-0820-56	1/2	2-1/2	NC	3/4	3/8	9-1244-56	1.0	5-1/2			
9-0822-56		2-3/4				9-1248-56		6			

Socket Head Stripper Bolts – Metric

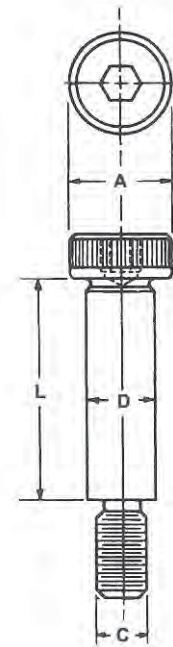
Product Features

Socket head stripper bolts (shoulder screws) are manufactured to close tolerances specifically for tool and die work. They are made from alloy steel that is heat-treated for additional strength. The final product has close tolerances and fully formed threads for the United Class 3A fit.

The knurled heads makes for sure finger grips that allow for fast assembly. The accurate hex socket provides for non-slip internal wrenching.



Part Number	Length L (mm)	Diameter D (mm)	Thread Pitch	A (mm)	C (mm)
9-06010-96	10	6	.080	10	M 5.0
9-06012-96	12				
9-06016-96	16				
9-06020-96	20				
9-06025-96	25				
9-06030-96	30	8	1.00	13	M 6.0
9-08012-96	12				
9-08016-96	16				
9-08020-96	20				
9-08025-96	25				
9-08030-96	30	10	1.25	16	M 8.0
9-08040-96	40				
9-08050-96	50				
9-10016-96	16				
9-10020-96	20				
9-10025-96	25	12	1.50	18	M 10.0
9-10030-96	30				
9-10040-96	40				
9-10050-96	50				
9-10060-96	60				
9-10070-96	70	16	1.75	24	M12.0
9-10080-96	80				
9-12016-96	16				
9-12020-96	20				
9-12025-96	25				
9-12030-96	30	16	1.75	24	M12.0
9-12040-96	40				
9-12050-96	50				
9-12060-96	60				
9-12070-96	70				
9-12080-96	80	16	1.75	24	M12.0
9-12090-96	90				
9-12100-96	100				
9-16030-96	30				
9-16040-96	40				
9-16050-96	50				
9-16060-96	60				
9-16070-96	70				
9-16080-96	80				
9-16090-96	90				

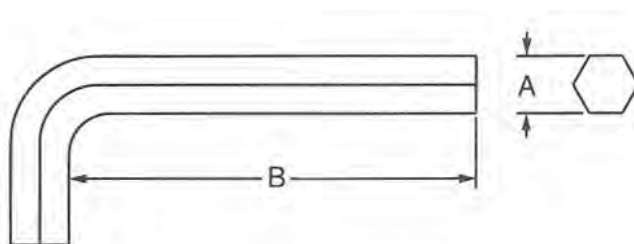


Hex Keys – Inch



Product Features

Hex keys are made to be interchangeable for the various types of screws and also for use with all standard makes of hex socket set screws.



Part Number	Hex Size A (in)	Arm Length B (in)
9-50-54	0.050	3
9-06-53	3/32	2
9-07-54	7/64	3-9/16
9-09-54	9/64	4-1/8
9-10-54	5/32	4-1/8
9-12-54	3/16	4-1/2
9-20-53	5/16	3-3/4
9-20-54	5/16	6
9-28-54	7/16	7-1/2
9-32-53	1/2	5-1/4
9-40-53	5/8	6-1/4
9-48-53	3/4	7-1/4



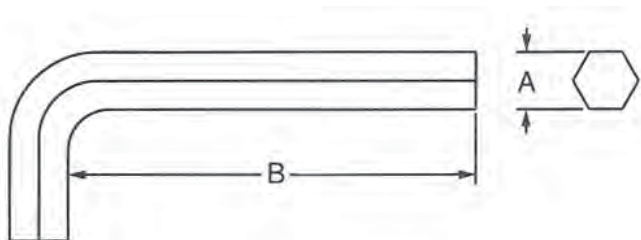
Hex Keys – Metric

Product Features

Hex keys are made to be interchangeable for the various types of screws and also for use with all standard makes of hex socket set screws.



9-140-93 & 9-140-94



Part Number	Hex Size A (mm)	Arm Length B (mm)
9-025-93	2.5	56
9-025-94		90
9-030-93	3.0	63
9-030-94		100
9-040-93	4.0	70
9-040-94		106
9-050-93	5.0	80
9-050-94		118
9-060-93	6.0	90
9-060-94		140
9-080-93	8.0	100
9-080-94		160
9-100-93	10.0	112
9-100-94		170
9-140-93	14.0	140
9-140-94		236
9-170-93	17.0	160
9-170-94		250
9-190-93	19.0	180
9-190-94		280

Pry Bars & Accessories



9-04-15 with shoe

Product Features

This forged steel pry bar, with a black oxide finish, is a practical tool for use in separating punch and die holders without damage to the die.

With its soft tempered brass shoe and bronze alloy tip, the pry bar easily separates the die without harming surfaces. Both shoe and tip are easily removable and replaceable.

Overall length is 18-1/4."

Part Number	Description
9-01-15	Pry Bar, as forged
9-04-15	Pry Bar with tip and shoe
9-05-15	Tip & Shoe Package (2 tips, 2 shoes, screws & nuts)
9-06-15	Tip Package (6 tips, screws & nuts)

Die Lubrication



9-01-52

Product Features

This die lubricant is specially prepared to provide efficient lubrication for guide posts in plain bearing applications.

Part Number	Size
9-01-52	1 Quart
9-02-52	1 Gallon
9-02-521	55 Gallons
9-02-522	15 Gallons



Deburring Tools

Product Features

These small, easy to handle deburring tools are ideal to correct minor imperfections.



Part Number	Description	Use
37822022	Multi-burr plastic handle	Contains 5 blades for different materials
37822025	E-100 Heavy duty replacement blades	For steel and aluminum
37822030	E-200 Heavy duty replacement blades	For brass and cast iron
37822035	E-350 Heavy duty replacement blades	For straight edges on all materials
37822037	E-101 Heavy duty replacement blades	For small holes in steel and aluminum
37822039	E-102 Heavy duty replacement blades	For small holes in brass and cast iron
37822050	Slim grip disposable burr	With heavy duty blade for steel or aluminum
37822105	Double-header versa burr	With telescoping holder & two standard duty blades
37822110	B-10 Standard duty replacement blades	For steel or aluminum
37822120	B-20 Standard duty replacement blades	For brass and cast iron
37822475	Deburring mini-set	1/8 countersink, scraper, and deburring tool



Layout Fluid



Product Features

Layout Fluid comes in blue or red. It is available in aerosol or liquid form, offered in sizes from 4 oz. to 5 gallons.

Part Number	Application Type	Color	Size
71280000	Aerosol	Blue	16 oz.
71280096		Red	
71280300	Aerosol	Blue	4 oz.
71280396		Red	
71280400	Brush	Blue	8 oz.
71280496		Red	
71280600	Brush	Blue	1 quart
71280696		Red	
71280700	Brush	Blue	1 gallon
71280796		Red	
71280800	Brush	Blue	5 gallons
71280896		Red	



Steel Stamps

Product Features

Steel stamps are available in letters and numbers. Character sizes are from 1/8" to 1/2".



Part Number	Description	Stamp Grade	Type	Character Size (in)
65620851	27 pc. Letter, A-Z,@	Heavy Duty	Letters	1/8
65621051				1/4
65621151				3/8
65621201				1/2
65621360	9 pc. Number, 0-8	Heavy Duty	Numbers	1/8
65621440				1/4
65621480				3/8
65621500				1/2
65621625	36 pc. Combo, A-Z, 0-8	Heavy Duty	Letters and Numbers	1/8
65621628				1/4
65622150	27 pc. Letter, A-Z,@	Premier Industrial	Letters	1/8
65622350				1/4
65622450				3/8
65622550				1/2
65622861	9 pc. Number, 0-8	Premier Industrial	Numbers	1/8
65622941				1/4
65622981				3/8
65623021				1/2
65624005	36 pc. Combo, A-Z, 0-8	Premier Industrial	Letters and Numbers	1/8
65624008				1/4



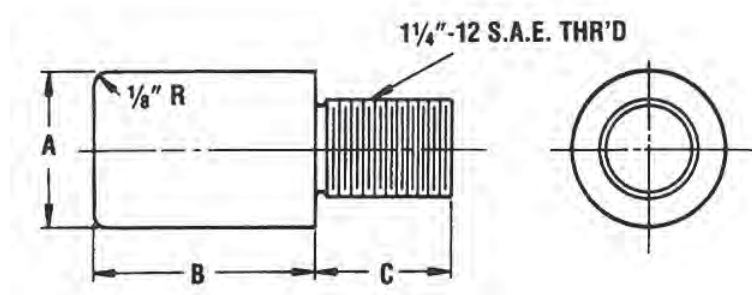
Punch Shanks



8-2522-1

Product Features

Steel punch shanks are made to dimensions with accurately cut threads for use on any type of die set.



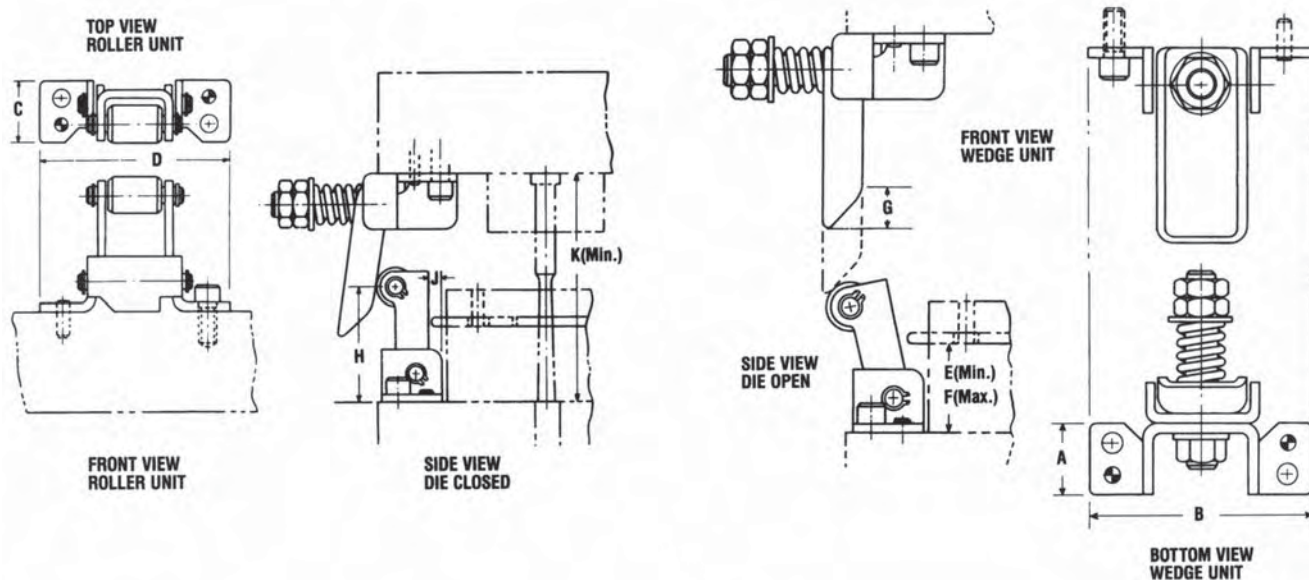
Part Number	Diameter A (in)	Length B (in)	Thread Length C (in)
8-2422-1	1-1/2	2-1/8	1-3/8
8-2424-1			1-1/2
8-2428-1			1-3/4
8-2432-1			2
8-2436-1			2-1/4
8-2440-1			2-1/2
8-2456-1			3-1/2
8-2522-1	1-9/16	2-1/8	1-3/8
8-2524-1			1-1/2
8-2528-1			1-3/4
8-2532-1			2
8-2536-1			2-1/4
8-2540-1			2-1/2
8-2556-1			3-1/2
8-3222-1	2	2-7/8	1-3/8
8-3224-1			1-1/2
8-3228-1			1-3/4
8-3232-1			2
8-3236-1			2-1/4
8-3240-1			2-1/2
8-3256-1			3-1/2
8-4022-1	2-1/2	2-7/8	1-3/8
8-4024-1			1-1/2
8-4028-1			1-3/4
8-4032-1			2
8-4036-1			2-1/4
8-4040-1			2-1/2
8-4056-1			3-1/2
8-4822-1	3	2-7/8	1-3/8
8-4824-1			1-1/2
8-4828-1			1-3/4
8-4832-1			2
8-4836-1			2-1/4
8-4840-1			2-1/2
8-4856-1			3-1/2



Stock Pusher

Product Features

These stock pushers mount on the front, rear or sides of a die set to best suit die and feed. Both sizes of stock pushers are supplied with three different length wedges, allowing the diemaker to select the best wedge for a particular shut height.



Part Number	A	B	C	D Min.	E Max.	F	G	H	J Min.	K	Wedge Lengths	Spring Rate
9-90-6	7/8	2-13/16	7/8	2-13/16	7/8	1-3/4	5/8	1-11/16	1/8	3	2-3/8,* 2-7/8, 3-3/8	300 lb/in
9-95-6	1-3/8	3-3/8	1-1/4	3-3/8	1-1/4	2-1/4	1-1/8	2	3/16	4	3-13/16,* 4-5/16, 4-13/16	1630 lb/in

Screws, dowels and mounting instructions are included in package with each Stock Pusher.

* Shortest wedge length is assembled into unit; other wedges are included in package.



Pad Retainers – Inch

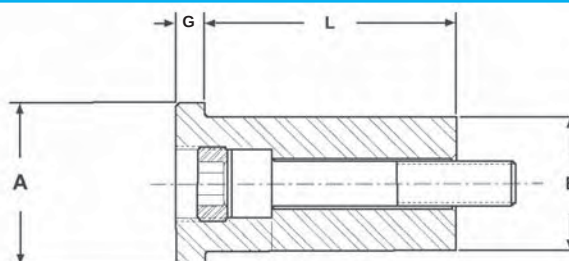


125-250

Product Features

Pad retainers are manufactured from 1144 steel and hardened to 28-54 Rockwell C-scale. They are machined to precise tolerances in order to retain the pad and assure parallelism during use.

The NP Series is also available, by special order, that offers three prongs as opposed to knurl.



UNITS INCLUDE:
SOC. SET SCREWS AND
SOC. HD. CAP SCREW

MATERIAL:
SPOOL = S.A.E. 1144
R/C 28-34

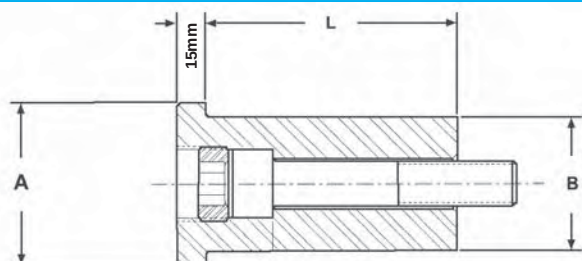
Part Number	Shank Diameter B (in)	Length L (in)	Shoulder Diameter A (in)	Shoulder Thickness G (in)
106-100	.81	1.00	1.06	.375
106-125		1.25		
106-150		1.50		
106-175		1.75		
106-200		2.00		
106-225		2.25		
106-250		2.50		
106-275		2.75		
106-300	1.00	3.00	1.25	.50
106-325		3.25		
106-350		3.50		
125-100		1.00		
125-125		1.25		
125-150		1.50		
125-175		1.75		
125-200		2.00		
125-225		2.25		
125-250		2.50		
125-275		2.75		
125-300		3.00		
125-325		3.25		
125-350		3.50		
125-375		3.75		
125-400	1.25	4.00	1.62	.50
125-450		4.50		
125-500		5.00		
125-550		5.50		
125-600		6.00		
162-100		1.00		
162-125		1.25		
162-150		1.50		
162-175		1.75		
162-200	1.50	2.00	1.87	.50
162-225		2.25		
162-250		2.50		
162-275		2.75		
162-300		3.00		
162-325		3.25		
162-350		3.50		
162-375		3.75		

Part Number	Shank Diameter B (in)	Length L (in)	Shoulder Diameter A (in)	Shoulder Thickness G (in)
162-400	1.25	4.00	1.62	.50
162-450		4.50		
162-500		5.00		
162-550		5.50		
162-600		6.00		
187-100	1.50	1.00	1.87	.50
187-125		1.25		
187-150		1.50		
187-175		1.75		
187-200		2.00		
187-225		2.25		
187-250		2.50		
187-275		2.75		
187-300		3.00		
187-325		3.25		
187-350		3.50		
187-375		3.75		
187-400		4.00		
187-450		4.50		
187-500		5.00		
187-550		5.50		
187-600		6.00		
200-150	1.62	1.50	2.00	.50
200-175		1.75		
200-200		2.00		
200-225		2.25		
200-250		2.50		
200-275		2.75		
200-300		3.00		
200-325		3.25		
200-350		3.50		
200-375		3.75		
200-400		4.00		
200-450		4.50		
200-500		5.00		
200-550		5.50		
200-600		6.00		

Pad Retainers – Metric

Product Features

Pad retainers are manufactured from 1144 steel and hardened to 28-54 Rockwell C-scale. They are machined to precise tolerances in order to retain the pad and assure parallelism during use.



UNITS INCLUDE:
SOC. SET SCREWS AND
SOC. HD. CAP SCREW

MATERIAL:
SPOOL = S.A.E. 1144
R/C 28-34



Part Number	Shank Diameter B (mm)	Length L (mm)	Shoulder Diameter A (mm)
NR50-30	40	30	50
NR50-40		40	
NR50-45		45	
NR50-50		50	
NR50-60		60	
NR50-65		65	
NR50-70		70	
NR50-75		75	
NR50-90		90	
NR50-115		115	
NR50-130		130	
NR50-140		140	
NR50-160		160	
NR70-40	60	40	70
NR70-45		45	
NR70-50		50	
NR70-60		60	
NR70-65		65	
NR70-70		70	
NR70-75		75	
NR70-90		90	
NR70-100		100	
NR70-115		115	
NR70-130		130	
NR70-140		140	
NR70-160		160	



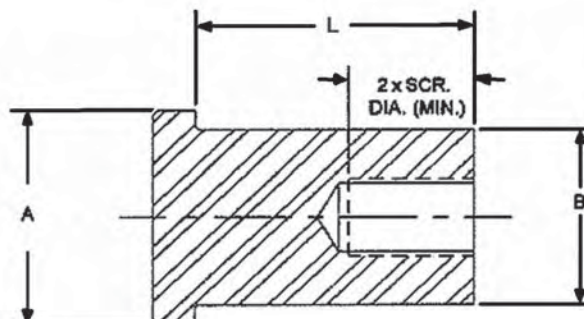
Reverse Mount Pad Retainers – Inch



125-250R

Product Features

Pad retainers are manufactured from 1144 steel and hardened to 28-54 Rockwell C-scale. They are machined to precise tolerances in order to retain the pad and assure parallelism during use.



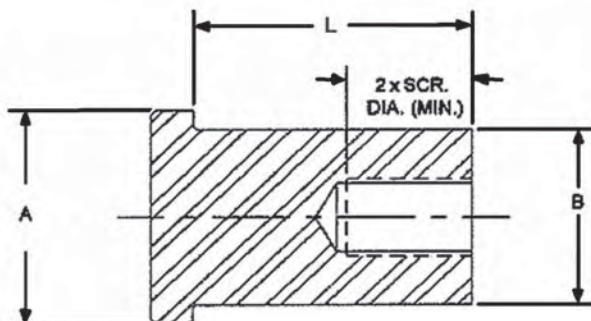
Part Number	Shank Diameter B (in)	Length L (in)	Shoulder Diameter A (in)
106-100R	.81	1.00	1.06
106-125R		1.25	
106-150R		1.50	
106-175R		1.75	
106-200R		2.00	
106-225R		2.25	
106-250R		2.50	
106-275R		2.75	
106-300R		3.00	
106-325R		3.25	
106-350R		3.50	
125-100R	1.00	1.00	1.25
125-125R		1.25	
125-150R		1.50	
125-175R		1.75	
125-200R		2.00	
125-225R		2.25	
125-250R		2.50	
125-275R		2.75	
125-300R		3.00	
125-325R		3.25	
125-350R		3.50	
125-375R		3.75	
125-400R		4.00	
125-450R		4.50	
125-500R		5.00	
125-550R		5.50	
125-600R		6.00	
162-100R	1.25	1.00	1.62
162-125R		1.25	
162-150R		1.50	
162-175R		1.75	
162-200R		2.00	
162-225R		2.25	
162-250R		2.50	
162-275R		2.75	
162-300R		3.00	
162-325R		3.25	
162-350R		3.50	
162-375R		3.75	

Part Number	Shank Diameter B (in)	Length L (in)	Shoulder Diameter A (in)
162-400R	1.25	4.00	1.62
162-450R		4.50	
162-500R		5.00	
162-550R		5.50	
162-600R		6.00	
187-150R	1.50	1.50	1.87
187-175R		1.75	
187-200R		2.00	
187-225R		2.25	
187-250R		2.50	
187-275R		2.75	
187-300R		3.00	
187-325R		3.25	
187-350R		3.50	
187-375R		3.75	
187-400R		4.00	
187-450R		4.50	
187-500R		5.00	
187-550R		5.50	
187-600R		6.00	
200-150R	1.62	1.50	2.00
200-175R		1.75	
200-200R		2.00	
200-225R		2.25	
200-250R		2.50	
200-275R		2.75	
200-300R		3.00	
200-325R		3.25	
200-350R		3.50	
200-375R		3.75	
200-400R		4.00	
200-450R		4.50	
200-500R		5.00	
200-550R		5.50	
200-600R		6.00	

Reverse Mount Pad Retainers – Metric

Product Features

Pad retainers are manufactured from 1144 steel and hardened to 28-54 Rockwell C-scale. They are machined to precise tolerances in order to retain the pad and assure parallelism during use.



Part Number	Shank Diameter B (mm)	Length L (mm)	Shoulder Diameter A (mm)
NR50-30R	40	30	40
NR50-40R		40	
NR50-45R		45	
NR50-50R		50	
NR50-60R		60	
NR50-65R		65	
NR50-70R		70	
NR50-75R		75	
NR50-90R		90	
NR50-115R		115	
NR50-130R		130	
NR50-140R		140	
NR50-160R		160	
NR70-40R	60	40	60
NR70-45R		45	
NR70-50R		50	
NR70-60R		60	
NR70-65R		65	
NR70-70R		70	
NR70-75R		75	
NR70-90R		90	
NR70-100R		100	
NR70-115R		115	
NR70-130R		130	
NR70-140R		140	
NR70-160R		160	



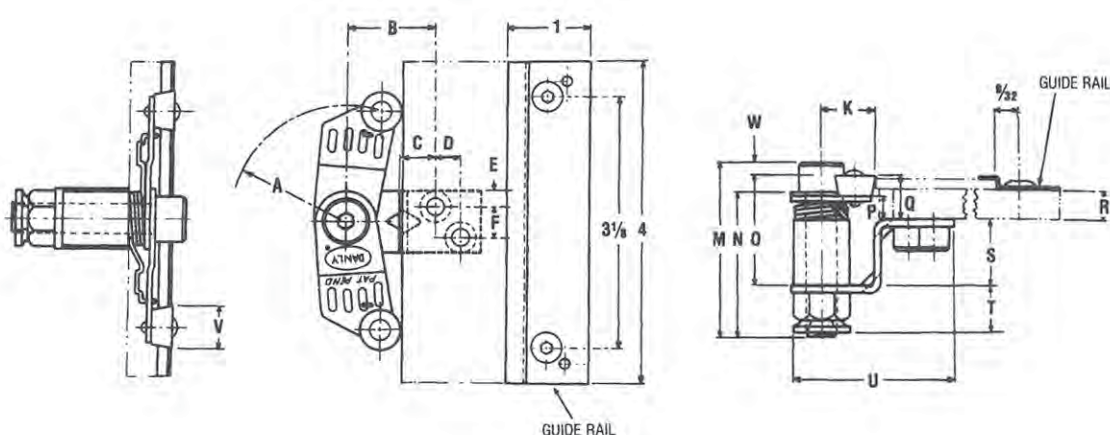
Roller Stock Guides



9-60-6

Product Features

The roller stock guides provide for accurate guiding of strip and coil stock. This product is designed to withstand hard wear and vibration. All posts are made of steel and the rollers, arms, collar and brackets are hardened.



Part Number	Roller Guide	A	B	C	D	E	F	K	M	N
9-70-6	Large	2	1-15/32	5/8	1/4	5/16	7/16	7/8 min.	3-1/4	2-3/4
9-60-6	Small	1-3/8	1-1/16	7/16	5/16	3/16	3/8	5/8 min.	2-1/8	1-3/4

Part Number	Roller Guide	O	P	Q	R	S	T	U	V	W
Large	1.836	.244	.617	3/8 *	1-7/32	19/32	2-3/4	3/4	.164	9-70-6
Small	1.351	.292	.538	3/8 *	13/16	15/32	2	1/2	.164	9-60-6

* If platform thickness is other than 3/8", certain easily-made mounting adjustments are necessary. These adjustments are covered in the mounting instructions included in each box.



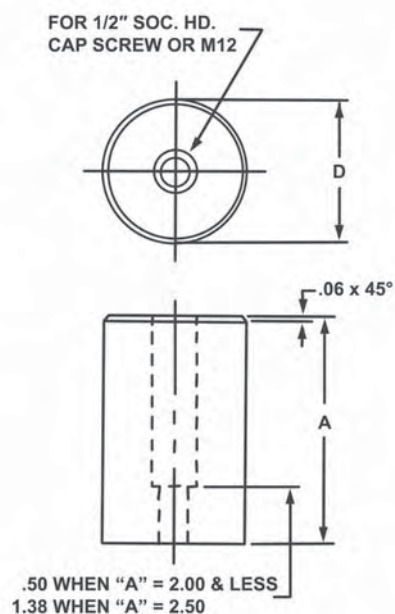
Stop Blocks

Product Features

These stop blocks are precision machined from 1018 material. Additionally, the blocks are inspected to provide uniform quality and dimensions.



Part No. (in)	Diameter D (in)	Length A (in)
20-150CSB	2.00	1.50
20-200CSB	2.00	2.00
20-250CSB		2.50
20-300CSB		3.00
20-350CSB	2.00	3.50
20-400CSB		4.00
20-425CSB		4.25
20-475CSB	2.00	4.75
20-525CSB		5.25
20-550CSB		5.50
20-600CSB	2.00	6.00
20-650CSB		6.50
25-150CSB	2.50	1.50
25-200CSB	2.50	2.00
25-250CSB		2.50
25-300CSB	2.50	3.00
25-350CSB		3.50
25-400CSB	2.50	4.00
25-425CSB		4.25
25-475CSB		4.75
25-525CSB	2.50	5.25
25-550CSB		5.50
25-600CSB	2.50	6.00
25-650CSB		6.50



Notes

