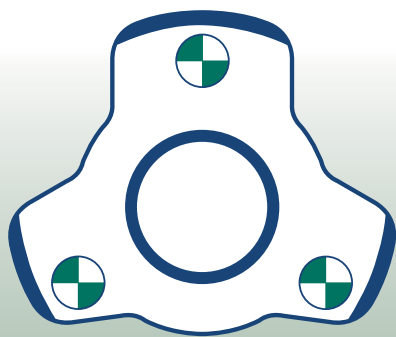
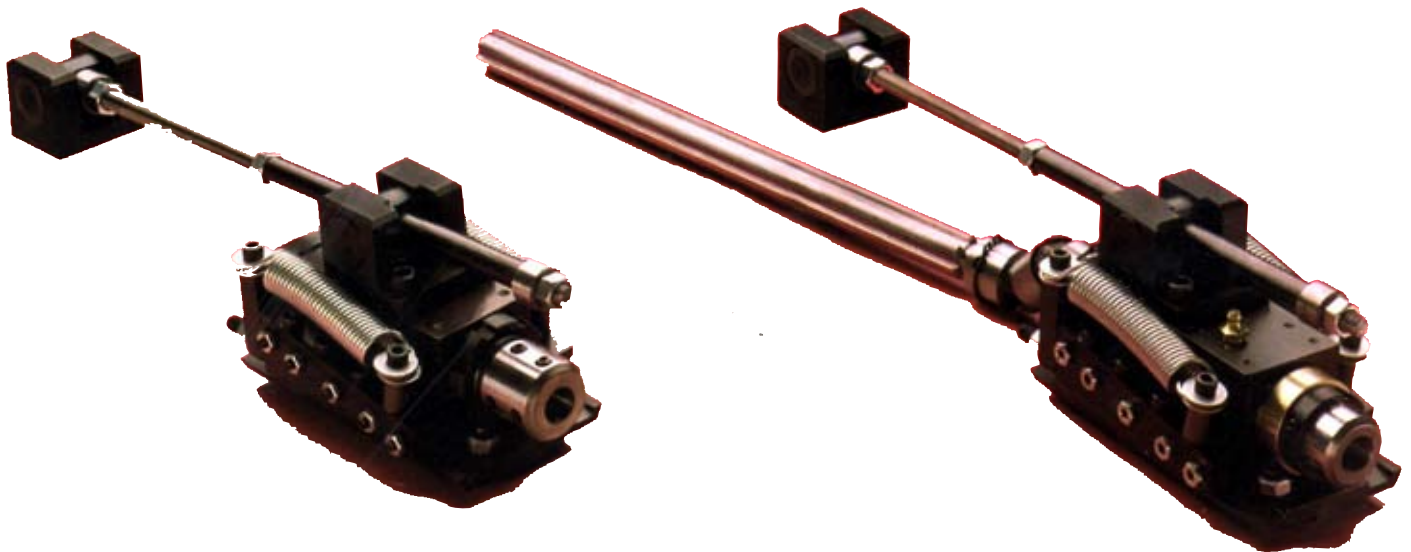


Heavy Duty Recessing Attachments



BME INC.
Screw Machine Solutions

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Recess Attachment Code Number

NATIONAL ACME RECESS ATTACHMENT					
Machine Size & Model	Bore	Rise	Stationary Plain	Adjustable Stationary	Mill Recess Oil
5/8 RN-6 (Flat Base)	5/8	10°	AS-1-19-0	AA-10-19-0	AM-3-19-40
9/16 & 1" RA-6 9/16 & 1" RAN-6 (Flat Base)	5/8	10°	AS-1-1-0	AA-10-1-0	AM-3-1-40
9/16 & 1" RA-6 (Angular Base)	5/8	10°	AS-1-2-0	AA-10-2-0	AM-3-2-40
2-3/8 HSC-6 Acme Chucker (Flat Base)	5/8	10°	AS-1-15-0	AA-10-15-0	AM-3-15-59
1-1/4 RA-6 1-3/4 RB-6 (Flat Base)	3/4	15°	AS-3-3-0	AA-12-3-0	AM-28-3-5
1" 1-1/4, 1-5/8 R-6 1-1/4 RA-6 1" RAS-6 (Angular Base)	3/4	15°	AS-3-4-0	AA-12-4-0	AM-31-4-5
1-1/4 RB-6 1-5/8 RBN-6 (Flat Base)	3/4	15°	AS-3-5-0	AA-12-5-0	AM-28-5-5
1-5/8 RA-6 & B 1-5/8 & 2" RB-655 2 RAS-6 (Flat Base)	3/4	15°	AS-3-6-0	AA-12-6-0	AM-28-6-15
2-5/8 RB-6 (Flat Base)	1"	15°	AS-12-8-0	AA-18-8-0	AM-12-8-18
2-5/8 RB-6 2-1/4 RB-6 (Flat Base)	1"	15°	AS-12-10-0	AA-18-10-0	AM-12-10-18
2" R & RA-6 2 1/4" R & RA-6 2-5/8 R & RA-6 (Angular Base)	1"	15°	AS-12-9-0	AA-18-9-0	AM-13-9-66
3-1/2 RB-6 3-1/2 RB-6 (Flat Base)	1"	15°	AS-12-11-0	AA-18-11-0	AM-12-11-14
4 RB-6 (Flat Base)	1"	15°	AS-12-12-0	AA-18-12-0	AM-12-12-XX
4-3/4 RB-4 (Flat Base)	1"	15°	AS-12-13-0	AA-18-13-0	AM-12-13-XX
7-1/4 RB-4 7-3/4 RB-4 (Flat Base)	1"	15°	AS-12-14-0	AA-18-14-0	AM-12-14-XX

CONE RECESS ATTACHMENT					
8 SPINDLE					
Machine Size & Model	Bore	Rise	Stationary Plain	Adjustable Stationary	Mill Recess Oil
1" VKA & A 1-1/4 A 1-5/8 VA, VB & A 5-5/8 A, VG & VQA (4-1/2 Radius Base)	3/4	15°	CS-3-5-0	CA-12-5-0	CM-28-5-19
2-1/4 GL 2-5/8 GK 3 GN 3-1/8 GM 8" GO & GJ 8 SPINDLE (7" Radius Base)	1"	15°	CS-12-10-0	CA-18-10-0	CM-12-10-32
2-1/4, 2-5/8-C 3-1/4 - C 8 SPINDLE (Flat Base)	1"	15°	CS-12-13-0	CA-18-13-0	CM-12-13-13
6 SPINDLE					
1" SW, 1 1/4 SX 1-1/2 SY & SK 1-5/8 TA, TAA & A 5-7/8 A & TE (3.375 Radius Base)	3/4	15°	CS-3-2-0	CA-12-2-0	CM-28-2-19
2-1/4 SD 2-5/8 SE 7-7/8 TD (4.50 Radius Base)	1"	15°	CS-12-7-0	CA-18-7-0	CM-12-7-13
3-1/2 SF 4" S 9-3/4 TJ (6" Radius Base)	1"	15°	CS-12-9-0	CA-18-9-0	CM-12-9-13
1" TVA, TVB 1" A, 1 1/4 A (Flat Base)	3/4	15°	CS-3-11-0	CA-12-11-0	CM-28-11-51
2-1/4 - C 2-5/8 - C (Flat Base)	1"	15°	CS-12-12-0	CA-18-12-0	CM-12-12-XX
3-1/2 - C 4" - C 4-1/4 - C (Flat Base)	1"	15°	CS-12-14-0	CA-18-14-0	CM-12-14-XX
4 SPINDLE					
5" KL, 5 1/2 K 5-1/4 KR (Radius Base)	1"	15°	CS-12-8-0	CA-18-8-0	CM-12-8-XX

XX - SPECIFY SPLINE SIZE

NEW BRITAIN RECESS ATTACHMENT					
Machine Model	Bore	Rise	Stationary Plain	Adjustable Stationary	Mill Recess Oil
51 D.T. Base	5/8	10°	NS-1-10-0	NA-10-10-0	NM-3-10-40
52 D.T. Base	3/4	15°	NS-3-2-0	NA-12-2-0	NM-28-2-28
60 D.T. Base	5/8	10°	NS-1-10-0	NA-10-10-0	NM-3-10-XX
61, 62 656, 657 D.T. Base	3/4	15°	NS-3-3-0	NA-12-3-0	NM-28-4-XX
602	3/4	15°	NS-3-4-0	NA-12-4-0	NM-28-4-XX
16	1"	15°	NS-12-8-0	NA-18-8-0	NM-12-8-XX
88	1"	15°	NS-12-7-0	NA-18-7-0	NM-12-7-90
865	1"	15°	NS-12-6-0	NA-18-6-0	NM-12-6-XX

GREENLEE RECESS ATTACHMENT					
Machine Size	Bore	Rise	Stationary Plain	Adjustable Stationary	Mill Recess Oil
1-5/8 - 6 2 - 6	3/4	15°	GS-3-2-0	GA-12-2-0	GM-28-2-4

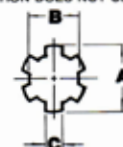
WARNER & SWASEY					
Machine Model & Size	Bore	Rise	Stationary Plain	Adjustable Stationary	Mill Recess Oil
5 SPINDLE M-2500 (1-3/4) M-2530 (2-1/4)	3/4	15°	SS-3-1-0	SA-12-1-0	SM-28-1-55
5 SPINDLE M-2540 6" Chucker	3/4	15°	SS-3-1-0	SA-12-1-0	SM-28-1-XX
6 SPINDLE M-3300 (1-1/4) M-3330 (2-1/4)	3/4	15°	SS-3-1-0	SA-12-1-0	SM-28-1-55

WICKMAN RECESS ATTACHMENT					
Machine Size & Model	Bore	Rise	Stationary Plain	Adjustable Stationary	Mill Recess Oil
5/8 - 6 #	5/8	10°	WS	WA	+ WM
1" - 6 & 1" - 8	5/8	10°	WS-1-2-0	WA-10-2-0	WM-3-2-86
1-3/8 - 6 # 1-3/4 - 6 #	3/4	15°	WS-3-3-0	WA-12-3-0	WM-28-3-47
1-3/4 - 8 2-1/4 - 6 # 6-5/8 - 6 Chuck #	3/4	15°	WS-3-5-0	WA-12-5-0	WM-28-5-47
2-5/8 - 6 7-1/4 - 6 Chuck	1"	15°	WS-12-6-0	WA-18-6-0	WM-12-6-XX
3-1/2 - 4 4-1/8 - 4	1"	15°	WS-12-7-0	WA-18-7-0	WM-12-7-XX
9" - 4 Chuck	1"	15°	WS-12-9	WA-18-9-0	WM-12-9-XX

XX = SPECIFY SPLINE SIZE

= 4th & 5th POSITION DOES NOT CLEAR - REMOVE ACCELERATED SLIDE

+ = NON-OIL

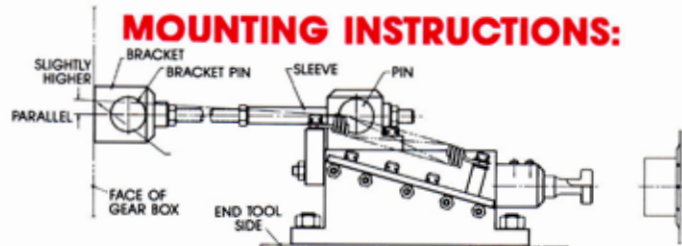


SPLINE NO.	SPLINE PART NO.	A	B	C	U-JOINT PART NO.
* 4	GRH-4-19	1.121	.881	.171	ARH-5-18
5	ARH-5-19	.995	.845	.250	ARH-5-18
13	CRH-13-19	1.498	1.1945	.372	CRH-13-18
14	ARH-14-19	1.495	1.267	.372	CRH-13-18
15	ARH-15-19	1.245	1.062	.310	ARH-5-18
18	ARH-18-19	1.248	1.062	.310	CRH-13-18
19	CRH-19-19	1.245	.989	.308	ARH-5-18
28	NRH-28-19	1.245	.989	.308	ARH-5-18
32	CRH-32-19	1.998	1.562	.498	CRH-13-18
40	ARH-40-19	.882	.693	.216	SRS-24-18
47	WRH-47-19	.998	.840	.181	ARH-5-18
51	CRH-51-19	1.245	.989	.308	ARH-5-18
55	SRH-55-19	.999	.839	.239	ARH-15-18
59	ARH-59-19	.745	.597	.185	ARH-40-18
66	ARH-66-19	1.245	1.061	.310	CRH-13-18
86	WRH-86-19	.745	.650	.180	ARH-40-18
90	NRH-90-19	1.495	1.189	.370	CRH-13-18

*GRH-4-19 HAS "10" SPLINES - ALL OTHERS HAVE "8"

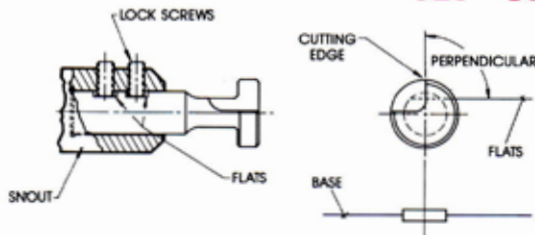
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MOUNTING INSTRUCTIONS:



1. Assemble sleeve into pin on attachment as shown. (May have to cut thr'd rod to length)
2. Set attachment on end tool slide, in approx. position. (Tighten hold-down bolts, finger tight)
3. Pull bracket back to face of gear box.
4. Position the bracket such, that it is aligned with the axis of the attachment, from the top view; and as nearly parallel with the end tool slide as possible. NOTE: The optimum condition would be for the bracket to be slightly higher than parallel in back at the start of the cut and slightly lower at the finish.
5. After positioning properly, scribe or mark around the outside of bracket (on the face of gear box.)
6. Remove thr'd rod from bracket pin.
7. Remove bracket pin from bracket.
8. Relocate bracket to your scribed lines on the face of the gear box and transfer (mark) the hole.
9. Drill and tap hole in face of gear box for 5/16-18 thr'd.
10. Bolt bracket to face of gear box.
11. Reassemble bracket pin and threaded rod.

SET-UP INSTRUCTIONS



STATIONARY & STATIONARY ADJUSTABLE TOOLS

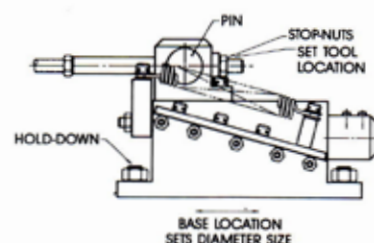
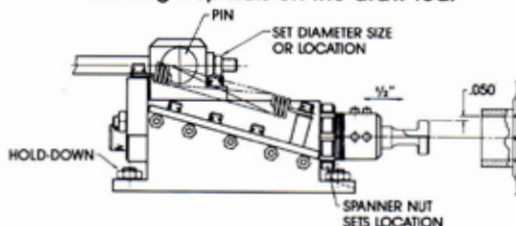
1. Grind flats on tool shank for the locking screws. These flats must be the proper distance from the end of the tool shank so they match up with the screw holes in the snout of the attachment. They must also be on the same side of the shank as the cutting edge and perpendicular to a line connecting the cutting edge and the center of the shank.
2. Insert the tool shank to the bottom of the bore and locate the tool radially so that the cutting edge is located a line through the center of the bore and perpendicular to the base.
3. Tighten the lock screws on the shank of tool.



MILLING CUTTER TOOLS

1. Grind flats on the tool shank for the locking screws. These flats must be the proper distance from the end of the tool shank so they match up with the screw holes in the "Bore" of the recess spindle.
2. Insert the tool shank to the bottom of the bore and locate the tool radially so that the flats line up with the lock screws.
3. Tighten the lock screws on the shank of the tool.

4. Run the end slide cam follower to the high point of the cam.
5. Loosen the stop-nuts on the draw rod.
6. Slide the attachment forward until the cutting edge of the tool is just away from the end of the part.
7. Adjust the stop plate screws. This will move the recess slide up, so that the cutting edge of the tool clears the side of the hole. by .050".
8. Slide the attachment forward so the tool enters the hole to the approximate location.
9. Set the stop-nuts on the draw rod to just touch the pin.
10. Back the end tool slide away from the spindle until tool is clear of the part.
11. Move the base forward (toward the spindle.) On a 10° recess attachment you must move the base approximately .284 and on a 15° rise recess attachment move base .186 to equal the .050 clearance (as in step 7) plus the desired single depth of the recess. NOTE: On a 10° rise attachment every 1.000" of base movement = .176 of rise. On a 15° it = .268 of rise.
12. Tighten the hold down bolts.
13. Run machine through one cycle and measure the size location of the recess.
14. Make necessary location adjustments. On a stationary, milling or hydra-mill recess attachment: by moving stop nuts on the draw rod. On an adjustable-stationary: By turning the spanner nut.
15. Make necessary size diameter adjustments on a stationary, milling or hydra-mill recess attachment: by moving the base toward or away from the spindle. On an adjustable-stationary: By moving stop nuts on the draw rod.



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Replacement Parts and Tool Holders:

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- Shave Heads
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- T-Slot Bolts
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- Roller Brackets
- Roller Pins
- Adjustable Screw Rollers
- Adapter Plates
- Wide/Narrow Rails
- Gibs
- Adjustable Brackets
- Compression Springs
- Bases
- Lower Bases
- Keys
- T-Nuts
- Cover Plates
- Head Bolts
- Head Pins
- Adjustable Brackets
- Adjustable Screws
- Bushings
- Shanks
- Springs (all sizes)
- Slides
- Slide Plates
- Draw-bar Brackets
- Grease Seals
- Oil Rings
- Snap Rings
- Retainers
- Spacers
- Threaded Pins
- Stationary Brackets
- Sleeves
- U-Joints
- Splines
- Bearings
- Lock Nuts
- Lock Washers
- Grease Fittings
- Snap Rings
- Base Housings
- Couplings
- Pinion Gears
- Bevel Gears
- Gear Shafts
- Spur Gears
- Arbors
- Lock Screws
- Base Mounts
- Base Housings
- Head Shafts
- All Fasteners



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