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PROCUNIER SAFETY CHUCK CO.

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Style MD

2-Spindle Head
Series 30000

3-Spindle Head
Series 31000

4-Spindle Head
Series 32000

INSTRUCTION MANUAL

INTRODUCTION

PROCUNIER's 2-Spindle, 3-Spindle and 4-Spindle heads are precision made for extended machine life when properly used. The 2-Spindle models provide a center distance of 1" minimum to 4" maximum. 3- and 4-Spindle models may be used on a 1½" minimum to 4½" maximum equally spaced bolt circle hole pattern only. Either of the heads may be used for right or left hand without any alterations. The gear case is prepacked with a good grade of bearing grease which should be replaced at regular intervals depending upon usage.

TAPPING

These heads are designed for use with our size 3 Lead Screw Tapping Units and are available with either a 1 :1 or 1:2 input to output gear ratio. **NOTE: When using 1:2 ratio, the driving lead screw must be ½ pitch of the tap or twice the pitch for metric threads.** (See lead screw assemblies on back page.) For left hand tapping, the tapping head, lead screw assembly and direction of drill press rotation, must be "left hand." Always use High Speed Ground Thread Taps, the proper flow of coolant for the material tapped and correct RPM recommended by your tap manufacturer.

Assembly to Tapper

Assembling these multiple spindle heads to a PROCUNIER Lead Screw Tapper is easily accomplished by the following sequence:

1. Disassemble the two cylinder caps from the lead screw tapper by removing the eight (8) screws carefully so as not to tear the two gaskets.
2. Assemble both cylinder guide housings with gaskets in place of the cylinder caps removed in step 1. Insert the eight screws (GB) but do not tighten.
3. Slide the multiple head into position on the lead screw tapper so that the guide rods and shank slide into position smoothly. Lock the lead screw chuck nut securely (series 30033, 31033 & 32033).
4. Now tighten the eight screws in the two cylinder guide housings.
5. Insert the tap and collet into the spindle and lock.
6. Adjust the spindles to the desired centers and lock in place.

CAPACITY

Series (Model)	Cutting Taps		Forming Taps	
	Soft Mat'l	Steel	Soft Mat'l	Steel
30033-4 (23MD)	#4-3/8" M3-M10	#4-5/16" M3-M8	#4-5/16" M3-M8	#4-1/4" M3-M7
31033-4 (33MD)	#4-1/4" M3-M7	#4-#1 2" M3-M5	#4-1/4" M3-M7	#4-#1 2" M3-M5
32033-4 (43MD)	#4-1/4" M3-M7	#4-#12" M3-M5	#4-1/4" M3-M7	#4-#12" M3-M5

DRILLING

These heads are designed for use on drill presses or drill units. They come equipped with a cover clamp which mounts to the non-rotating quill for accuracy and rigidity and are available with 1:1 input to output ratio as standard, but can be obtained with 1:2 ratio if desired. Use of High Speed Drills and a flow of the proper coolant is recommended.

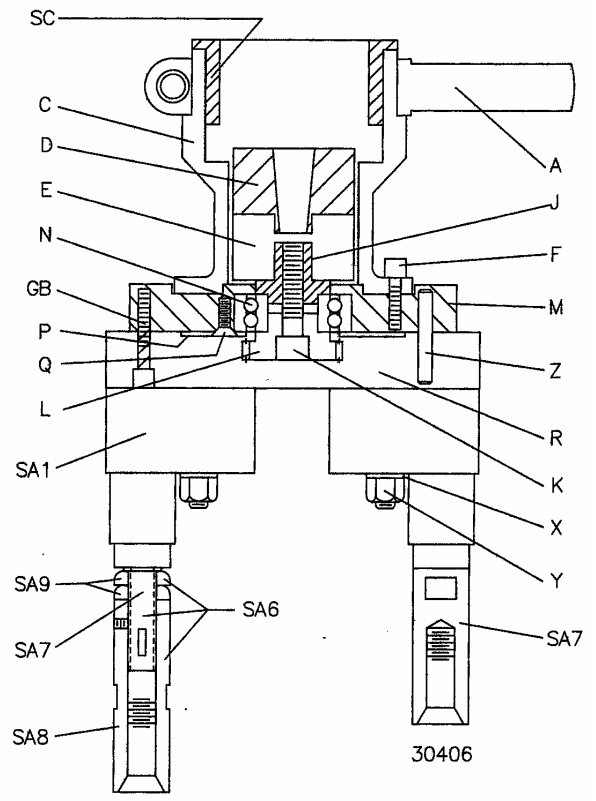
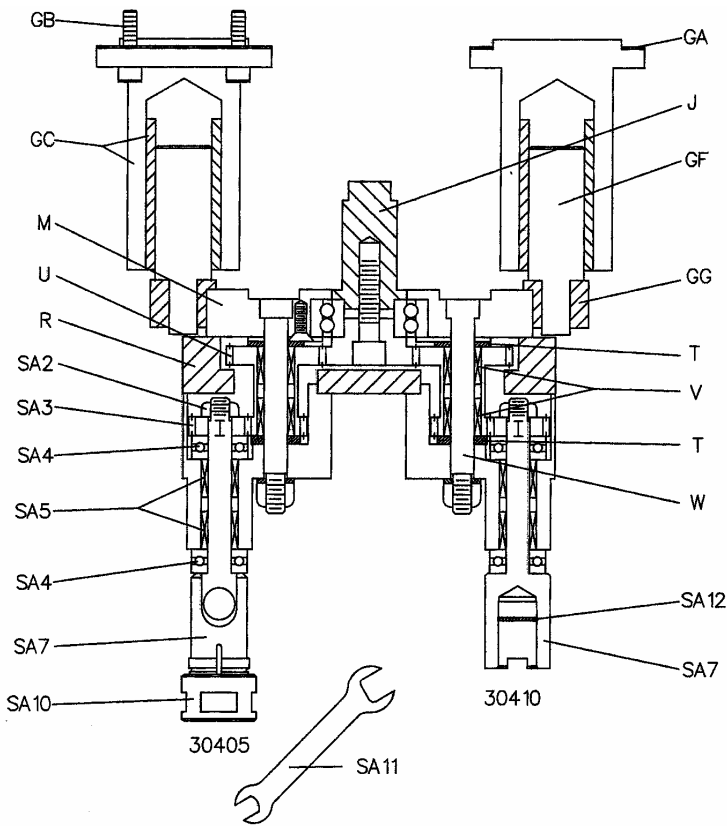
Assembly to Drill Press or Drill Unit

Attaching these multiple drill heads to a drill press or drill unit is easily accomplished by the following procedure:

1. Drill hole in Flange (A) to accept drill press stop rod and mount together.
2. Remove the chuck taper drill chuck and mount taper shank (D) in its place. If the unit is a morse taper style, mount the taper shank (D) directly.
3. Assemble the Flange (A), Split Collar (SC), and Adapter (E) to the multiple drill head and slide it over the spindle onto the quill making sure tang on shank (D) is fully engaged with slot in adapter (E), stop rod is properly located and then tighten flange screw (B).
4. Insert the drill and collet into the spindles and lock securely. Use tang type drills over 1/8" diameter.
5. Adjust spindles to desired location and lock Nut (Y). The complete unit may be rotated on the quill by loosening Screw (B) for greater versatility.

CAPACITY

Series	Soft Material	Steel
30035-99	1/16"-3/8"	1/16"-3/8"
31035-99	1/16"-3/8"	1/16"-5/16"
32035-99	1/16"-3/8"	1/16"-5/16"



NOTE: 31000 (3-Spindle Head) uses same parts as 32000 (4-Spindle Head)

Code	Description	Qty.	TAPPING				DRILLING	
			23MD 1:1 30033	23MD 1:2 30034	43MD 1:1 32033	43MD 1:2 32034	30035 thru 30078	32035 thru 32079
			See Unit List					
SC,C,D	Split Collar, Cover & Shank		-	-	-	-	-	-
A	Flange	1	-	-	-	-	42400	42400
E	Hex Adapter	1	-	-	-	-	33215	33215
F	Screw 10-32 x 1/2"	4	-	-	-	-	11223	11223
G	Adapter Guide Assy. (Incl. GA-GG)	1	30266	30266	30266	30266	-	-
GA	Cylinder Cap Gasket	2	23262	23262	23262	23262	-	-
GB	Screw 10-32 x 3/4"	8	14223	14223	14223	14223	14223	14223
GC	Cly. Guide Housing w/ Bushing	2	30230	30230	30230	30230	-	-
GF	Guide Rod	2	30233	30233	30233	30233	-	-
GG	Adapter Ring w/ screw	1	30267	30267	30267	30267	-	-
J	Drive Shank	1	30203	30203	30203	30203	30200	30200
K	Drive Screw 5/16-24 x 1"	1	30223	30223	30223	30223	30223	30223
L	Drive Gear	1	30220	30221	32220	32221	30220	32220
M	Body	1	30253	30253	32253	32253	30254	32254
N	Ball Bearing	1	11221	11221	11221	11221	11221	11221
P	Bearing Retainer	1	30224	30224	11228	11228	30224	30224
Q	Retainer Screw	4	11229	11229	11229	11229	11229	11229
R	Housing Plate	1	30255	30255	32255	32255	30255	32255
T	Thrust Washer	4 - 8	30216	30216	30216	30216	30216	30216
U	Idler Gear	2 - 4	30261	30262	32261	32262	30261	32261
V	Needle Bearing	4 - 8	30214	30214	30214	30214	30214	30214
W	Idler Stud	2 - 4	30259	30259	30259	30259	30259	30259
X	Idler Stud Washer	2 - 4	30225	30225	30225	30225	30255	30255
Y	Lock Nut	2 - 4	57638	57638	57638	57638	57638	57638
Z	Dowel	2	14246	14246	14246	14246	14246	14246

Code	SPINDLE ASSEMBLY PARTS LIST Description	2DS	5DS	5DA	5DC	5DT	QCO
		30405	30406	30407	30408	30409	30410
SA 1	Spindle Housing	30258	30258	30258	30258	30258	30258
SA 2	Lock Nut	21260	21260	21260	21260	21260	21260
SA 3	Spindle Gear	30260	30260	30260	30260	30260	30260
SA 4	Thrust Bearing	30213	30213	30213	30213	30213	30213
SA 5	Needle Bearing	30214	30214	30214	30214	30214	30214
SA 6	Spindle Complete (7-9)	-	-	30607	30608	30609	-
SA 7	Spindle Only	30615	30616	30617	30618	30618	30661
SA 8	Collet Adapter	-	-	33694	33699	33699	-
SA 9	Adjusting Nut	-	-	33695	-	-	-
SA 10	TG Nut	12287	-	-	-	-	-
SA 11	Wrench	12288	33675	33675	33675	33675	-
SA 12	"O" Ring	-	-	-	-	-	33712
	Collet Series - Tapping	52800	55800	55800	55800	55800	59800
	Collet Series - Drilling	52600	55600	55600	-	-	-

UNIT LIST

30000 Series Unit	31000 Series Unit	32000 Series Unit	Cover "C"	Taper Shank "D"	Split Collar "SC"
30035	31035	32035	30140	33208	42424
30036	31036	32036	30140	33208	42425
30037	31037	32037	30140	33208	42423
30038	31038	32038	30140	33208	42427
30039	31039	32039	30140	33208	42421
30041	31041	32041	30140	33208	42426
30042	31042	32042	30140	33207	42423
30043	31043	32043	30140	33207	42429
30044	31044	32044	30140	33206	42421
30045	31045	32045	30140	33206	42423
30047	31047	32047	30140	33208	42434
30048	31048	32048	30140	33208	42429
30049	31049	32049	30140	33208	42435
30050	31050	32050	30140	33209	42423
30051	31051	32051	30151	33207	42433
30052	31052	32052	30140	33207	42435
30053	31053	32053	30140	33207	42435
30061	31061	32061	30140	33209	42424
30063	31063	32063	30162	33202	—
30064	31064	32064	30162	33202	42427
30068	31068	32068	30162	33202	42434
30069	31069	32069	30162	33202	42435
30070	31070	32070	30162	33202	42424
30071	31071	32071	30171	33202	—
30077	31077	32077	30162	33202	42425
30078	31078	32078	30162	33202	42423

LEAD SCREW ASSEMBLIES

Series 30033, 31033 & 32033 uses lead screw assemblies series 23400 in catalog; lead screw pitch same as tap.

Series 30034, 31034 & 32034 uses lead screw assemblies series 23400 in catalog; lead screw pitch ½ that of tap or 2 times that of the tap for metric.

TRU-GRIP TAP COLLETS

Series 30405 uses tap collets series 52800 in catalog.

Series 30406-9 uses tap collets series 55800 in catalog.

Series 30410 uses tap collets series 58800 in catalog.

TRU-GRIP DRILL COLLETS

Series 30405 uses drill collets series 52600 in catalog.

Series 30406-7 uses drill collets series 55600 in catalog.

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