

Instructions and Parts List for No. CTL20 Ball Bearing Punch

CARE: Before attaching punch to spindle, grease punch head. Oil punch point.

OPERATION: One complete revolution (360°) of the spindle lowers punch 1/2". When punching I beams, bevel dies should be used. Punch couplers have left hand thread. Punch should turn freely after installation. On contact with metal being punched the punch should not turn. Stripper bolts must be level at all times.

To remove die, loosen die set screw and push die out. To replace, press die slowly into die holder using a piece of metal on top of die. Make sure die is not cocked. Tighten die set screw.

To assemble spindle assembly, place a small amount of heavy grease in ball race of spindle. Slide stop collar on spindle with notch "A" in stop collar in down position. Place 32 ball bearings (11/32") in ball race of spindle and thread into ball race sleeve as far as possible; turn back until ball race can be seen. Align notch "A" in stop collar with "B" start of ball race in frame and tighten the three stop collar set screws. Screw ball race sleeve into punch body until bottom of ball race sleeve is even with bottom of punch body. Align flats and insert set screw plugs and screws.

To assemble irregular shaped punches and dies, place die in frame. Do not tighten set screw. Fasten punch to spindle with coupler. Thread punch point through guide stripper and fasten guide stripper to frame using screws and spacers furnished. The guide stripper must be level with die and the punch point must never leave the guide stripper. Lower punch and align die and tighten die set screw. Raise punch and lower through die to recheck alignment.

FOR MAXIMUM OPERATOR SAFETY DO:

1. Read and understand this manual.
2. Use only No. 20 punches and No. 10 dies marked with a "W" in a circle or R-W designed for this tool.
3. Be sure you punch within the twenty ton capacity of this tool. Type and thickness of material versus final hole size will give you this tonnage.
4. Wear safety glasses.

FOR MAXIMUM OPERATOR SAFETY DO NOT:

1. Use punches and dies that are chipped or dulled.
2. Punch over capacity of the tool.
3. Nibble. Punch a full hole not a half hole as punch may contact die.

When ordering, list Item No., Part No., and Part Name

Item No.	Part No.	Part Name	No. Req'd
1	WS 14	Operating Handle Bolt 5/16 – 18 x 1/2 Hex Head Cap Screw	1
2	10-7	Operating Handle Washer	1
3	20-12	Operating Handle	1
4	20-26	48" Pipe Handle	1
5	24-5	Dust Cap	1
6	20-3	Spindle	1
7	50-2	Ball Race Sleeve	1
8	WS 1807	Ball Bearings(32perset) 11/32 Ball Bearing	1 Set
9	20-10	Stop Collar	1
10	WS 813A	Stop Collar Set Screw 1/4-20 x 1/4 Socket Set Cone Point	3
11	50-22	Ball Race Sleeve Set Screw Plug	2
12	WS 860	Ball Race Sleeve Set Screw 7/16-14 x 5/8 Socket Set Screw	2
13	CTL20S-50	Punch Body	1
14	20-11	11/16 Coupling Nut	1
15	20-25	3/4 Coupling Nut	1
16	20-35	13/16 Split Coupling Nut	1
17	WS 785	Die Set Screw 1/4-20 x 5/16 Headless Set Screw	1
18	WS 1333	Stripper Bolt Nut 3/8-16 Hex Jam	2
19	WS 34	Stripper Bolt 3/8-16 x 1 1/4 HexHead Cap Screw	2
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Consists of Item Nos. 6, 7, 8, 9,
10 and 14 fully assembled

Above parts are for tools built after July, 1 968.

Tools built before July, 1968 do not require Item Nos.

7, 11 and 12 but use the following:

5	20-4	Dust Cap	1
13	CTL20 – 50	Punch Body	1

