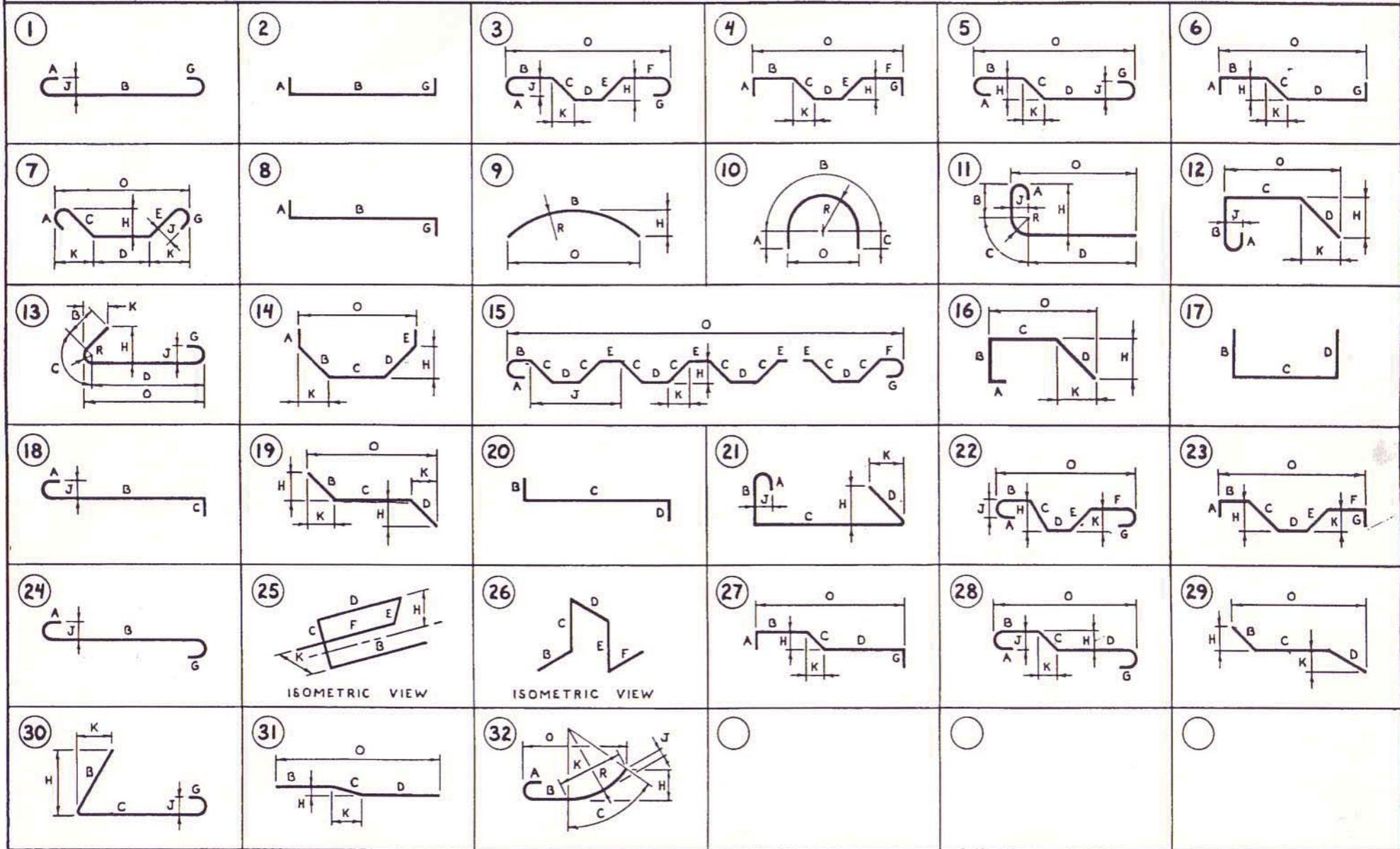
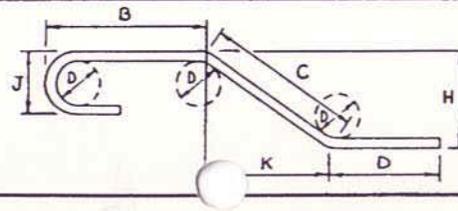


asa[®]/REBAR SYSTEM STANDARD BAR BENDS



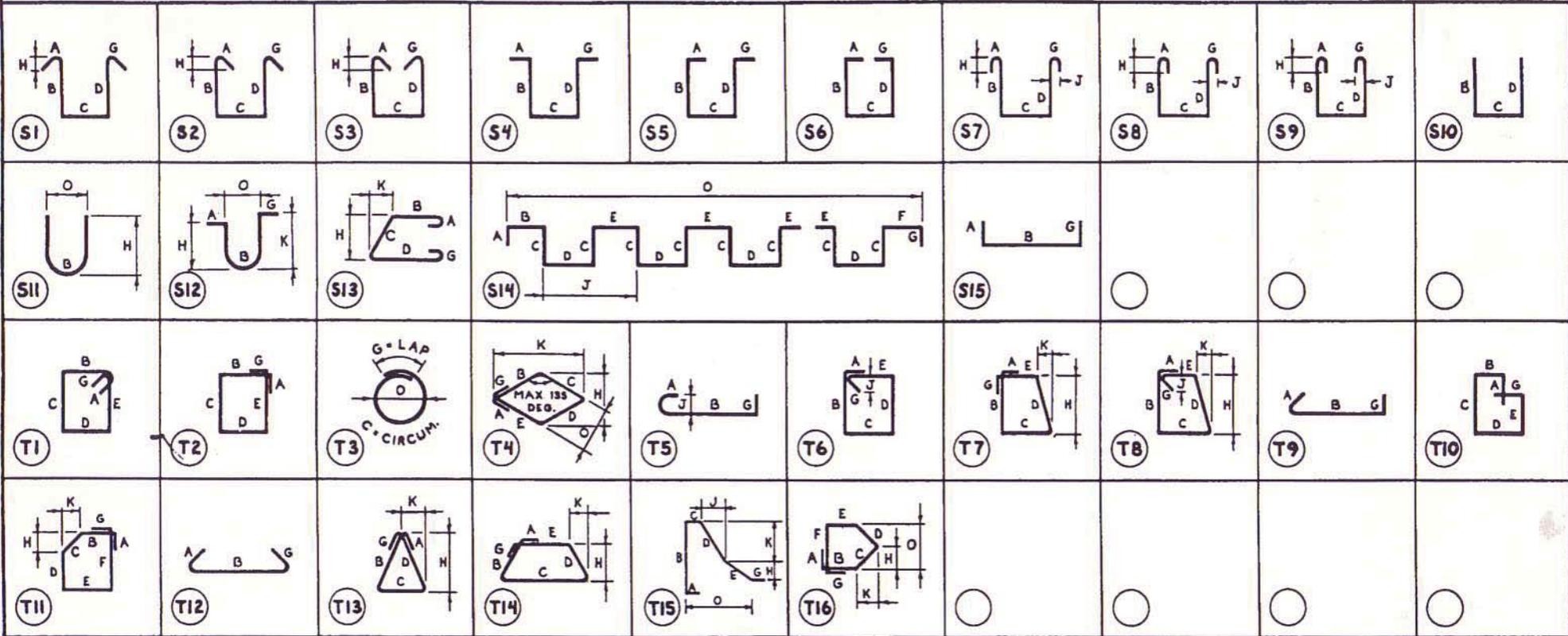
NOTES:

1. aSa Standard Bar Bends include only Types 1-32, T1-T16, and S1-S15.
2. All dimensions are out-to-out of bar except "A" and "G" on standard 180° and 135° hooks.
3. "J" dimension on 180° hooks to be shown only where necessary to restrict hook size, otherwise standard hooks are to be used.
4. Where "J" is not shown, "J" will be kept equal to or less than "H" on truss bars. Where "J" can exceed "H", it should be shown.
5. "H" dimension on stirrups to be shown where necessary to fit within concrete.



6. Unless otherwise noted, DIAMETER "D" is the same for all bends and hooks on a bar.
7. Where slope differs from 45° dimensions, "H" and "K" must be shown.
8. Where bars are to be bent more accurately than standard bending tolerances, bending dimensions which require closer fabrication should have limits indicated.
9. Figures in circles show types.
10. For recommended diameter "D", of bends, hooks, etc., see CRSI or ACI tables.
11. Type S1-S15, T1-T16 apply to bar sizes #3 through #8.

aSa®/REBAR SYSTEM STANDARD BAR BENDS

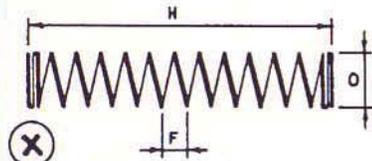


SPIRAL NOTES:

J = TURNS AT 'F' SPACING.
K = EXTRA TURNS (HALF T. # B).

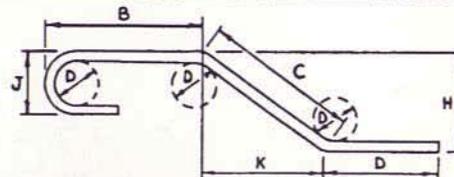
PLAIN SPIRAL WITH SPACERS LOOSE.

PLAIN SPIRAL WITH SPACERS MOUNTED.



NOTES:

1. aSa Standard Bar Bends Include only Types 1-32, T1-T16, and S1-S15.
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RECOMMENDED INDUSTRY PRACTICE – DETAILING

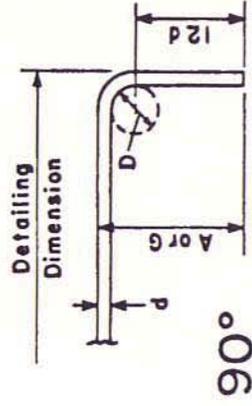
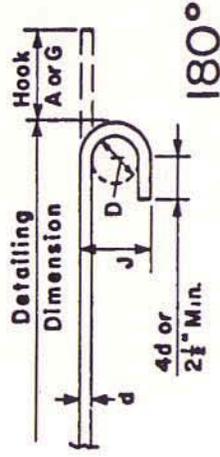
STANDARD HOOKS

All specific sizes recommended by CRSI below meet minimum requirements of ACI 318-83

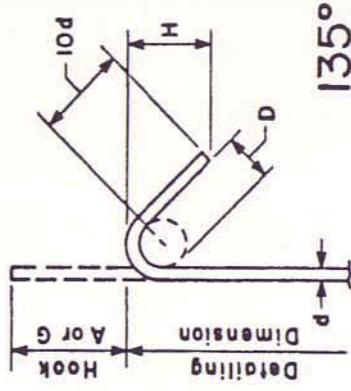
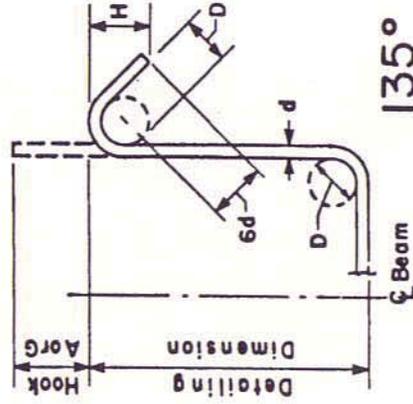
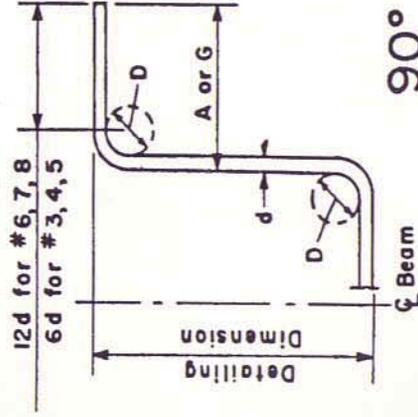
RECOMMENDED END HOOKS All Grades

D=Finished bend diameter

Bar Size	180° HOOKS			90° HOOKS	
	D	A or G	J	A or G	A or G
# 3	2½	5	3	6	6
# 4	3	6	4	8	8
# 5	3¾	7	5	10	10
# 6	4½	8	6	1-0	1-0
# 7	5¼	10	7	1-2	1-2
# 8	6	11	8	1-4	1-4
# 9	9½	1-3	11¾	1-7	1-7
# 10	10¾	1-5	1-1¼	1-10	1-10
# 11	12	1-7	1-2¾	2-0	2-0
# 14	18¼	2-3	1-9¾	2-7	2-7
# 18	24	3-0	2-4½	3-5	3-5



STIRRUP AND TIE HOOKS



135° SEISMIC STIRRUP/TIE HOOKS

STIRRUPS (TIES SIMILAR)

STIRRUP AND TIE HOOK DIMENSIONS

Grades 40-50-60 ksi

Bar Size	D (in.)	90° Hook		135° Hook	
		Hook A or G	Hook A or G	Hook A or G	H Approx.
#3	1½	4	4	4	2½
#4	2	4½	4½	4½	3
#5	2½	6	5½	5½	3¾
#6	4½	1-0	7¾	7¾	4½
#7	5¼	1-2	9	9	5¼
#8	6	1-4	10¼	10¼	6

135° SEISMIC STIRRUP/TIE

HOOK DIMENSIONS

Grades 40-50-60 ksi

Bar Size	D (in.)	135° Hook	
		Hook A or G	H Approx.
#3	1½	5	3½
#4	2	6½	4½
#5	2½	8	5½
#6	4½	10¾	6½
#7	5¼	1-0½	7¾
#8	6	1-2¼	9

NOTES:

1. 180° hook J dimension (sizes #10, #11, #14 and #18), and A or G dimension (#14 and #18) have been revised to reflect recent test research using ASTM/ACI bend test criteria as a minimum.
2. Tables for Stirrup and Tie Hook dimensions have been expanded to include sizes #6, #7, and #8 to reflect current design practices.