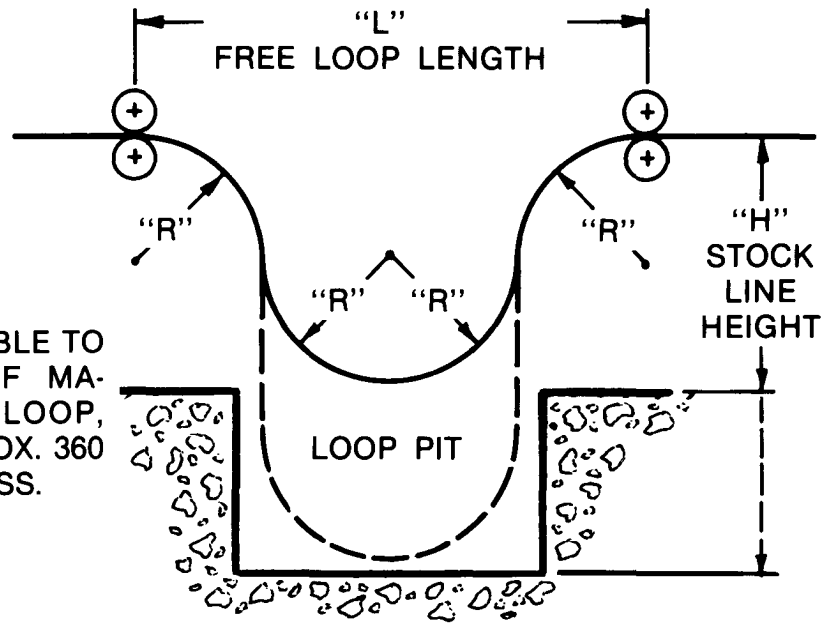


# COOPER-WEYMOUTH, PETERSON

## FREE LOOP AREA & SLACK MATERIAL AVAILABILITY FOR MILD STEEL COIL STOCK



"R" = RADIUS DESIRABLE TO AVOID DISTORTION OF MATERIAL IN FREE LOOP, CALCULATED AT APPROX. 360 TIMES METAL THICKNESS.

CHART BELOW SHOWS INCHES OF LOOP LENGTH REQUIRED FOR A GIVEN THICKNESS & INCHES OF SLACK MATERIAL IN A FULL LOOP.

MATERIAL THICKNESS	"L" LOOP LENGTH	*AMOUNT OF SLACK MATERIAL AT VARIOUS STOCK LINE HEIGHTS "H"					
		30" "H"	36" "H"	42" "H"	48" "H"	54" "H"	60" "H"
.015"	48	39	51	63	75	87	99
.031"	72	35	41	53	65	77	89
.062"	96	25	36	46	55	67	79
.093"	144	22	27	34	43	52	54
.125"	180	16	26	30	37	44	48
.187"	276	15	17	19	28	39	42
.250"	360	MATERIALS BEYOND 3/16" THICKNESS ARE OFTEN HANDLED MORE EFFECTIVELY IN A CONFINED LOOP SYSTEM. THE ENGINEERING STAFF CAN RECOMMEND THE MOST SUITABLE SYSTEM TO INDIVIDUAL APPLICATION SPECIFICATIONS.					
.312"	456						

\*SLACK MATERIAL EQUALS AMOUNT OF MATERIAL IN THE FULL LOOP LESS THE FREE LOOP LENGTH. CALCULATIONS AND SUBTRACTION HAVE ALREADY BEEN MADE IN ABOVE FIGURES.

**PLEASE NOTE:** AT LEAST TWO FEED LENGTHS OF SLACK MATERIAL SHOULD BE MADE AVAILABLE IN EACH APPLICATION. SLACK MATERIAL AVAILABILITY ACTUALLY DECREASES AS THE LOOP LENGTH IS INCREASED FOR A GIVEN STOCK LINE. THE OPTIMUM SLACK AVAILABILITY THEREFORE OCCURS AT THE MINIMUM PRACTICAL LOOP LENGTH FOR A GIVEN THICKNESS. A LOOP PIT (SHOWN ON DIAGRAM IN DOTTED LINES) CAN PROVIDE 2 INCHES OF ADDITIONAL SLACK MATERIAL FOR EACH INCH OF DEPTH, ONCE "H" IS EQUAL TO AT LEAST TWO TIMES "R".

EXAMPLE: CUSTOMER WILL USE A MAXIMUM MATERIAL THICKNESS OF .062". HE WISHES TO FEED MAXIMUM LENGTHS OF 36". HIS STOCK LINE HEIGHT IS 48".

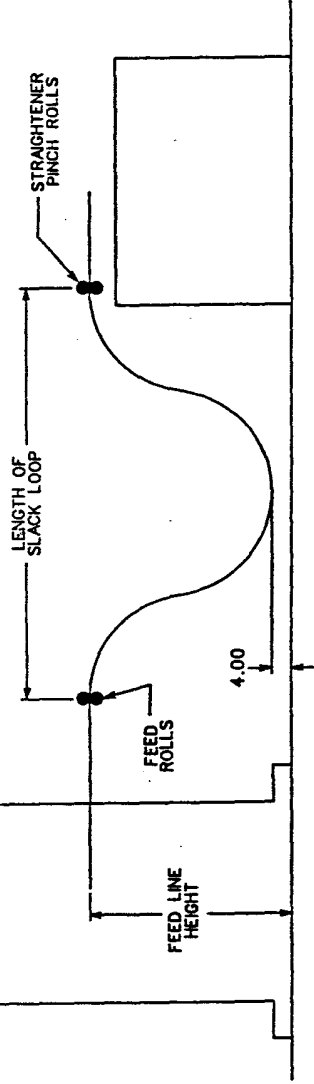
READING DIRECTLY FROM THE CHART FOR .062" THICK MATERIAL, WE FIND HE WILL REQUIRE A FREE LOOP LENGTH OF 96". AT HIS GIVEN STOCK LINE HEIGHT HE CAN ACCUMULATE 55" OF SLACK MATERIAL, ONLY ENOUGH TO SUPPORT A 27½" FEED LENGTH. TO SUPPORT HIS FULL FEED HE WILL REQUIRE A STOCK LINE HEIGHT ELEVATED TO AT LEAST 60", OR A LOOPING PIT OF AT LEAST 12" IN DEPTH. IT CAN BE SEEN THAT 24" OF ADDITIONAL SLACK CAN BE ACCUMULATED IN JUST THIS 12" HEIGHT CHANGE, BECAUSE THE 48" STARTING STOCK LINE HEIGHT WAS EQUAL TO AT LEAST TWO TIMES THE MATERIAL RADIUS.



**cooper-weymouth, peterson**

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TELEX NO. 950071



FEED LINE HEIGHT (DEPTH OF LOOP)

STOCK THICKNESS (MILD STEEL) (40K PSI YIELD)	FEED LINE HEIGHT (DEPTH OF LOOP)														
	42"	44"	46"	48"	50"	52"	54"	56"	58"	60"	62"	64"	66"	68"	70"
MAXIMUM MATERIAL IN SLACK LOOP	38.50	42.00	45.50	49.50	53.50	57.50	61.50	65.50	69.50	73.50	77.50	81.50	85.50	89.50	93.50
LENGTH OF SLACK LOOP	88.31	88.8	89.12	89.25	89.25	89.25	89.25	89.25	89.25	89.25	89.25	89.25	89.25	89.25	89.25
MAXIMUM MATERIAL IN SLACK LOOP	32.50	35.00	38.00	41.00	44.00	48.00	51.50	55.00	58.50	62.50	66.50	70.50	74.50	78.50	82.50
LENGTH OF SLACK LOOP	108.31	109.69	110.88	111.94	112.81	113.62	114.19	114.65	115.00	115.19	115.19	115.19	115.19	115.19	115.19
MAXIMUM MATERIAL IN SLACK LOOP	28.00	30.50	33.00	36.00	38.50	41.50	44.00	47.00	50.00	53.00	56.50	60.00	63.00	67.00	70.50
LENGTH OF SLACK LOOP	126.94	129.00	130.88	132.66	134.25	135.75	137.12	138.31	139.44	140.38	141.25	142.00	142.62	143.12	143.50
MAXIMUM MATERIAL IN SLACK LOOP	25.00	27.00	29.00	31.00	33.50	36.00	38.50	41.00	43.50	46.00	49.00	51.50	54.50	57.50	60.50
LENGTH OF SLACK LOOP	146.88	149.69	152.25	154.69	157.00	159.19	161.25	163.19	165.00	166.69	168.25	169.69	171.06	173.31	173.50
MAXIMUM MATERIAL IN SLACK LOOP	22.00	23.50	25.50	27.50	29.50	31.50	33.50	35.50	38.00	40.50	42.00	45.00	47.50	50.00	52.50
LENGTH OF SLACK LOOP	168.44	171.88	175.19	178.31	181.31	184.19	186.88	189.54	192.00	194.38	196.62	198.75	200.81	202.75	204.69
MAXIMUM MATERIAL IN SLACK LOOP	20.00	21.50	23.00	25.00	26.50	28.50	30.50	32.50	34.50	36.50	38.50	40.50	42.50	44.50	47.00
LENGTH OF SLACK LOOP	187.50	191.50	195.38	199.12	202.69	206.12	209.38	212.56	215.62	218.56	221.38	224.12	226.75	229.25	231.62
MAXIMUM MATERIAL IN SLACK LOOP	19.00	20.50	22.50	24.00	25.50	27.50	29.00	31.00	33.00	35.00	37.00	39.00	41.00	43.00	45.00
LENGTH OF SLACK LOOP	194.94	199.19	203.31	207.25	211.00	214.69	218.19	221.56	224.81	228.00	231.00	233.94	236.75	239.50	242.12
MAXIMUM MATERIAL IN SLACK LOOP	17.00	18.00	20.00	21.00	22.50	24.00	26.00	27.50	29.00	31.00	32.50	34.00	36.00	38.00	40.00
LENGTH OF SLACK LOOP	221.25	226.25	231.12	235.81	240.38	244.75	249.00	253.12	257.12	260.94	264.69	268.31	271.88	275.25	278.69
MAXIMUM MATERIAL IN SLACK LOOP	15.00	16.00	17.50	19.00	20.00	21.50	23.00	24.50	26.00	27.50	29.00	30.50	32.00	33.50	35.00
LENGTH OF SLACK LOOP	250.00	255.88	261.62	267.06	272.38	277.56	282.62	287.50	292.19	296.81	301.31	305.69	309.88	314.06	218.12
MAXIMUM MATERIAL IN SLACK LOOP	11.50	12.50	13.50	14.50	16.00	17.00	18.00	19.00	20.00	21.50	22.50	23.50	24.50	26.00	27.00
LENGTH OF SLACK LOOP	322.00	329.88	337.50	344.94	352.19	359.19	366.06	372.75	379.25	385.69	391.88	398.00	404.00	409.81	415.50

MAXIMUM MATERIAL AVAILABLE IN LOOP (DEFINED IN INCHES)

LENGTH OF SLACK LOOP (DEFINED IN INCHES)

NOTE: AT LEAST TWO FEED LENGTHS OF SLACK MATERIAL SHOULD BE MADE AVAILABLE IN EACH APPLICATION. CONSULT FACTORY IF LOOPING CONDITIONS DO NOT MEET THIS CRITERIA.