RMG
Payoff Equipment

Uncoiling

Three uncoiling methods are used to payoff rod and wire:

Turntables, flippers and power-driven uncoilers. Following are specifications for use of each method:

Turntables

Diameter range:
Up to .500" (12.7 mm)

Material: Wire or rod

Flippers

Diameter range:
.218" to .625" (5.5 to 16 mm)

Material: Rod only

Power-Driven Uncoilers

Diameter range:
.500" to 1.75" (12.7 to 45 mm)

Material: Wire or rod

Turntables
Turntables represent the most commonly used method of payoff for all wire and rod sizes up to 1/2" (12.7 mm). Relatively low in cost, turntables facilitate material storage and handling. They require a minimum amount of floor space. The only disadvantage associated with turntables is that the entire production process must be stopped during coil changeover. This is not a serious consideration on applications involving wire sizes smaller than 1/4" (6.3 mm). However, on larger diameter applications the downtime associated can be a serious consideration particularly with high-speed headers or straightening and cutting machines.

Flippers
Flippers are ideally used for rod sizes up to 5/8" (16 mm). Downtime due to coil changeover can be completely eliminated by using double-end coil stands or flippers. Since the coil is stationary and not rotating, the end of the active coil can be butt-welded to the beginning of the standby coil.

When the active coil is depleted, the operator rotates the flipper so that the standby-coil becomes the active coil, allowing continuous operation of the wire drawing machine and production machine.

Flipping is limited to applications involving the payoff of hot rolled rod into an in-line wire drawer. Flippers require more space than turntables but on certain higher speed applications, the advantage of being able to enjoy continuous parts
production outweighs the floor space consideration.

Power-Driven Uncoilers
Power-driven uncoilers represent the best payoff method for uncoiling large diameter stock 1/2" to 1-3/4" (12.7 to 45 mm).

Equipped with power-driven feed rolls and a straightener, these uncoilers pre-feed and prestraighten the stock, enabling the operator to get the end of large diameter material to the next operation at the push of a button. They also sense the coil condition and power rotate the coil, when necessary, maintaining a smooth material flow.

Welding

Butt welding is an integral part of the wire production process. Joining the end of one coil to the beginning of the next coil eliminates the need to restring the wire drawer. When flipping, this is done while production continues. With the use of a turntable, although production must cease, welding is still an advantage to avoid having to restring the wire drawer.

In all cases, the actual weld is removed during the production process. Welding can aslo be used as a pointing tool for large diameters, if desired.

Pointing

In setting up a wire drawing machine, it is necessary to provide a pointed end on the wire or rod. This pointed end is inserted through the drawing die and clamped by a gripper chain which is used to wrap the capstan with the wire.

One of the best methods of providing this pointed end is to simply butt-weld a slightly smaller length of wire, about 6" to 8" long, to the head end of the coil.

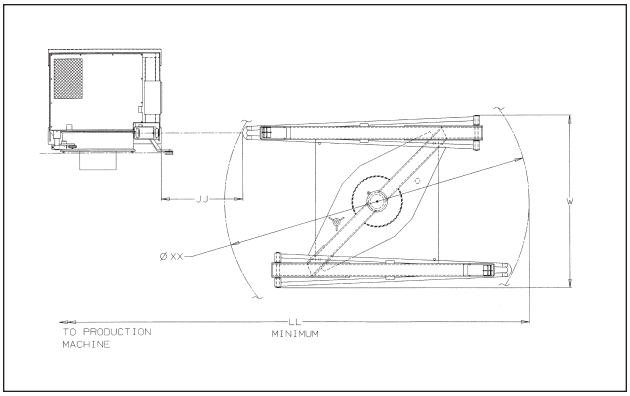
Applications involving smaller wire diameters usually do not require butt welding. Alternative pointing methods are:

1. Pull pointing.
2. Roll pointing.
3. Push pointing.
4. Grinding.

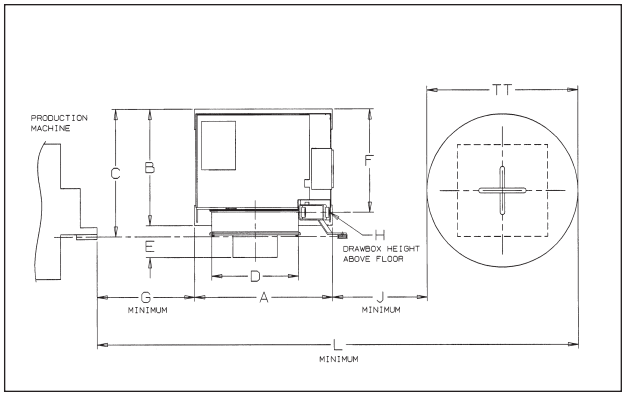
Shown here are typical floor plans featuring a Flipper payoff arrangement or Turntable payoff arrangement

5.2 General Notes

1. Suggested distances between machines and payoff units should be regarded as approximate. RMG's estimates have taken into consideration wire and rod diameters, wire speed, ease of set-up for operator and wire behavior with respect to both diameter and stiffness.
2. Dimension **G** assumes feed roll height is equal to draw box height **H.** If feed roll height is lower than **H,** add 4" (101.6 mm) to **G** for each one inch that feed rolls are lower than **H.**
3. For high speed applications (higher than 150 fpm/45.7 m/min.) distance **JJ** should be increased. Submit all details to RMG for recommendations.
4. Floor plan layouts shown here rep resent right to left wire flow, which usually applies only to cold heading applications. Straightening and cutting machines and some other applications use a reverse layout.



Flipper Payoff Arrangement



Turntable Payoff Arrangement

Model	Max HP [kW]	Inches [mm] A	B	C	D	E	F	G	H	J	K	P	Turntable Model 8630 TT	8630 L	8540 TT	8540 L	8360 TT	8360 L	J J Rod Size 1/4	3/8	1/2	5/8	Z-Flipper Z-6500 XX	LL	W
34	5 [3.7]	32 [813]	29 [737]	28 [711]	20 [508]	5 [127]	25 [635]	8 [203]	34 [864]	12 [305]	54 [1372]	No Air eq'd	30 [762]	82 [2083]	40 [1016]	92 [2337]	50 [1270]	102 [2591]							
45	7.5 [5.5]	32 [813]	29 [737]	28 [711]	20 [508]	7 [178]	25 [635]	10 [254]	34 [864]	18 [457]	54 [1372]		30 [762]	90 [2286]	40 [1016]	100 [2540]	50 [1270]	110 [2794]	72 [1828]						
56	20 [15]	42 [1067]	29 [737]	40 [1016]	24 [610]	8 [203]	36 [914]	12 [305]	37 [940]	24 [610]	65 [1651]	80 PSI (5.5 bar) Plant Air Required			40 [1016]	118 [2997]	50 [1270]	128 [3251]	72 [1828]	96 [2438]			148 [3759]	238 [6045]	83 [2108]
67	20 [15]	42 [1067]	29 [737]	41 [1041]	28 [711]	8 [203]	36 [914]	18 [457]	39 [991]	36 [914]	68 [1727]				40 [1016]	136 [3454]	50 [1270]	146 [3708]		96 [2438]	108 [2743]		148 [3759]	256 [6502]	83 [2108]
	50 [37]	42 [1067]	29 [737]	54 [1372]	28 [711]		50 [1270]	36 [914]	39 [991]	44 [1118]	74 [1880]				40 [1016]	162 [4115]	50 [1270]	172 [4369]		120 [3048]	120 [3048]		148 [3759]	286 [7264]	83 [2108]
78	20 [15]	42 [1067]	29 [737]	41 [1041]	28 [711]	8 [203]	37 [940]	24 [610]	39 [991]	36 [914]	68 [1727]				40 [1016]	142 [3607]	50 [1270]	152 [3861]		120 [3048]	120 [3048]		148 [3759]	262 [6655]	83 [2108]
89	30 [22]	54 [1372]	29 [737]	50 [1270]	36 [914]	1 [25]	44 [1118]	8 [203]	46 [1168]	48 [1219]	77 [1956]						50 [1270]	182 [4623]			120 [3048]		148 [3759]	292 [7417]	83 [2108]
910	50 [37]	85 [2159]	29 [737]	57 [1448]	36 [914]		50 [1270]	10 [254]	48 [1219]	48 [1219]	71 [1803]						50 [1270]	213 [5410]			120 [3048]	120 [3048]	148 [3759]	317 [8052]	83 [2108]
	100 [75]	85 [2159]	63 [1600]	62 [1574]	36 [914]		56 [1422]	10 [254]	48 [1219]	60 [1524]	83 [2108]										120 [3048]	120 [3048]	148 [3759]	341 [8661]	83 [2108]
1011	75 [56]	100 [2540]	65 [1651]	64 [1626]	44 [1118]		57 [1448]	5 [127]	54 [1372]	60 [1524]	83 [2108]											144 [3658]	148 [3759]	368 [9347]	83 [2108]
	125 [93]	100 [2540]	75 [1905]	74 [1880]	44 [1118]		67 [1702]	7 [178]	54 [1372]	60 [1524]	83 [2108]											144 [3658]	148 [3759]	384 [9754]	83 [2108]
Models 1112, 1214, 1416		Consult Factory Floor Plan Layout																							

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