

Expanding Mandrels

Designed and Built by A•D•S Machinery Corp.

Year	Job	Application	Type	Number Segments	Collapse Diameter (inches)	Expand Diameter (inches)	Lagging Diameter (inches)	Face (inches)	Coil Weight (pounds)	Expansion	Gripper	Outboard Bearing	Remarks
1958	513	Payoff	Link	4	14.5	17	20	42	6000	Powered	No	No	
1958	545	Payoff	Link	4	15.5	18.5	N/A	11	2000	Manual	No	No	
1960	771	Coiling	Link	3	15.62	16	N/A	4	3000	Powered	Yes	No	Saloon Door - Two Gripper Slots
1960	772	Both	Wedge	2	2.44	2.71	N/A	27	500	Manual	No	No	Paper Winder/Unwinder
1961	925	Both	Wedge	2	2.94	3.18	N/A	54	1000	Manual	No	No	Paper Winder/Unwinder
1961	943	Payoff	Link	4	13.5	16.5	20	35	3500	Powered	No	No	Round Post Segment Guides
1961	946	Both	Wedge	2	2.94	3.18	N/A	32.5	500	Powered	No	No	Paper Winder/Unwinder
1962	991	Payoff	Link	4	14.5	17	N/A	27.5	11,000	Powered	No	No	
1962	999	Payoff	Link	4	14.5	17	20	29	11,000	Powered	No	No	
1962	1029	Payoff	Wedge	3	14.5	17.5	N/A	36	15,000	Powered	No	No	
1962	1082	Coiling	Wedge	4	15	16	N/A	17	6600	Manual	Yes	No	
1962	1105	Payoff	Link	4	17.5	20.5	N/A	28	5000	Manual	No	No	
1963	1210	Payoff	Wedge	4	19/22.5	21.5/25	N/A	13	10,000	Powered	No	No	Double Stub Payoff Reel - Stepped for Two Diameters
1964	1240	Payoff	Link	4	15	17	N/A	5	3000	Manual	No	No	
1964	1264	Payoff	Wedge	4	3	3.25	N/A	15	2000	Manual	No	No	
1964	1264	Payoff	Wedge	4	5.88	6.18	N/A	13	4500	Manual	No	No	
1964	1290	Both	Wedge	2	3.38	3.62	N/A	54	1000	Manual	No	No	Paper Winder/Unwinder
1964	1378	Coiling	Wedge	4	7.8x4.3	8.2x4.7	N/A	12	1500	Manual	No	No	Rectangular Mandrel for Transformer Cores
1965	1040	Coiling	Wedge	3	19.25	20	N/A	54.5	35,000	Powered	Yes	No	Separate Gripper Segment on Links
1965	1341	Payoff	Link	4	18.5	24.5	N/A	60	10,000	Powered	No	No	
1965	1402	Payoff	Link	4	17	20.5	N/A	53	15,000	Powered	No	No	Saloon Door
1965	1402	Coiling	Link	4	19.5	20	N/A	53	15,000	Powered	Yes	No	Saloon Door - Double Grippers
1965	1419	Payoff	Link	4	15.5	18	N/A	15	1400	Manual	No	No	
1965	1419	Coiling	Link	4	15.5	18	N/A	15	1400	Manual	Yes	No	Manual Gripper
1965	1491	Coiling	Screw	3	15.5	16	N/A	4	3000	Manual	Yes	No	Saloon Door - Manual Gripper
1966	1454	Payoff	Link	4	14.5	17	N/A	32	13,000	Powered	No	No	3 Mandrels
1966	1454	Payoff	Link	4	14.5	17	N/A	56	22,500	Powered	No	No	2 Mandrels
1966	1454	Coiling	Link	3	15.5	16	N/A	59.5	25,000	Powered	Yes	No	5 Mandrels - Saloon Door - Double Gripper - Slots Only
1966	1461	Coiling	Link	3	15.5	16	N/A	3	1000	Manual	No	No	16 Mandrels - Saloon Door

Expanding Mandrels

Designed and Built by A•D•S Machinery Corp.

Year	Job	Application	Type	Number Segments	Collapse Diameter (inches)	Expand Diameter (inches)	Lagging Diameter (inches)	Face (inches)	Coil Weight (pounds)	Expansion	Gripper	Outboard Bearing	Remarks
1967	1568	Payoff	Link	4	14.25	17	N/A	20	4500	Powered	No	No	
1967	1644	Coiling	Wedge	8	18.75	20	N/A	32.5	15,000	Powered	Yes	No	Double Gripper - Cam Operated - Spring Loaded
1967	1707	Coiling	Wedge	3	9.5	10	N/A	44	10,000	Manual	Yes	No	Saloon Door - Manual Gripper
1967	1719	Coiling	Wedge	3	7.38	7.62	N/A	40.5	5500	Powered	Yes	No	Saloon Door - Rotating Gripper Segment
1967	1817	Both	Wedge	2	5.94	6.25	N/A	35	1000	Powered	No	No	4 Mandrels - Paper Winder/Unwinder
1968	1583	Payoff	Screw	3	18	31	N/A	52	15,000	Powered	No	No	
1968	1583	Coiling	Wedge	8	18.6	20	N/A	52	15,000	Powered	Yes	No	Double Gripper - Cam Operated - Spring Loaded
1968	1644	Payoff	Wedge	3	2.94	3.25	N/A	28	500	Manual	No	No	Paper Unwinder
1968	1644	Coiling	Wedge	3	2.94	3.25	N/A	28	500	Manual	No	No	Paper Winder
1968	1713	Payoff	Link	4	11	12.5	N/A	15	5000	Powered	No	No	
1968	1713	Coiling	Link	3	15.5	16	N/A	15	5000	Powered	No	No	Saloon Door
1968	1739	Payoff	Link	4	13	15.5	N/A	28	14,300	Powered	No	No	
1968	1739	Coiling	Wedge	6	18.75	20	N/A	35	14,300	Powered	No	No	
1968	1753	Payoff	Link	4	14.5	17	N/A	20	4,000	Powered	No	No	
1968	1753	Coiling	Link	3	15.5	16	N/A	20	4,000	Powered	No	No	Saloon Door
1968	1769	Payoff	Link	4	14.5	17	N/A	14	1,500	Manual	No	No	
1968	1769	Coiling	Wedge	3	15.62	16.12	N/A	15	1,500	Manual	No	No	Saloon Door
1969	1649	Payoff	Link	4	14.5	17	N/A	15	1500	Manual	No	No	
1969	1649	Coiling	Wedge	3	15.5	16	N/A	15	1500	Manual	Yes	No	Saloon Door - Manual Gripper
1969	1776	Payoff	Link	4	15.38	20.5	N/A	40	25,000	Powered	No	No	2 Mandrels
1969	1882	Payoff	Link	4	15	17.5	N/A	36	15,000	Powered	No	No	
1969	1895	Coiling	Link	3	15.5	16	N/A	4	1,000	Manual	No	No	Saloon Door
1970	1861	Payoff	Link	4	15.38	20.5	N/A	40	25,000	Powered	No	No	2 Mandrels - Same as 1776
1970	1871	Coiling	Link	3	21.25	22	N/A	64	30,000	Powered	Yes	No	Saloon Door - Heavy Duty Gripper
1970	1969	Coiling	Link	3	19.5	20	N/A	35	15,000	Powered	No	No	Saloon Door - Separate Gripper Segment
1970	1979	Coiling	Wedge	4	19.25	20	N/A	60.5	20,000	Powered	Yes	Yes	Rectangular Shaft - Separate Gripper Segment
1970	1995	Payoff	Link	4	14	16.5	20	33	15,000	Powered	No	No	2 Mandrels
1970	1995	Coiling	Wedge	6	15.62	16	18 and 20	35	15,000	Powered	No	No	
1970	2002	Payoff	Link	4	18	20.5	N/A	48	25,000	Powered	No	No	

Expanding Mandrels

Designed and Built by A•D•S Machinery Corp.

Year	Job	Application	Type	Number Segments	Collapse Diameter (inches)	Expand Diameter (inches)	Lagging Diameter (inches)	Face Diameter (inches)	Coil Weight (pounds)	Expansion	Gripper	Outboard Bearing	Remarks
1970	2002	Coiling	Link	3	19.5	20	N/A	50	25,000	Powered	Yes	No	Saloon Door - Gripper Slot Only
1970	2034	Coiling	Screw	3	15.5	16	N/A	4	1000	Manual	Yes	No	Saloon Door - Manual Gripper
1970	2056	Payoff	Link	4	15.5	18.5	N/A	13	3000	Powered	No	No	
1970	2056	Coiling	Wedge	3	6.18	6.94	N/A	10	1,500	Powered	Yes	No	
1970	2062	Turnstile	Link	3	19.25	20.1	N/A	15	1,000	Manual	No	No	2 Mandrels - Mounted on Turnstile
1971	1897	Coiling	Wedge	3	19.38	20	N/A	36	15,000	Powered	No	No	
1971	1997	Payoff	Link	4	14	16.5	20	33	15,000	Powered	No	No	
1971	1997	Coiling	Wedge	3	19.38	20	N/A	36	15,000	Powered	No	No	
1971	2044	Payoff	Link	4	16	18.5	20	29.6	15,000	Powered	No	No	2 Mandrels - Elastomer Sleeve
1971	2044	Coiling	Link	4	16	18.5	20	29.6	15,000	Powered	No	No	Same as Payoff Mandrel
1971	2076	Coiling	Link	3	17.5	18	N/A	42	20,000	Powered	Yes	No	Saloon Door - Separate Gripper Segment on Links
1971	2146	Payoff	Wedge	3	17.5	20.5	24	30	15,000	Powered	No	No	
1971	2146	Coiling	Wedge	3	19.5	20	24	30	15,000	Manual	Yes	No	Saloon Door - Manual Gripper
1971	2196	Payoff	Link	6	15	16	N/A	2	500	Manual	No	No	Special Vertical Shaft Unit
1971	2196	Coiling	Link	3	15.5	16	N/A	8	500	Powered	No	No	Saloon Door - Expansion Cylinder Inside Mandrel
1972	2220	Coiling	Wedge	3	19.25	20	N/A	50	50,000	Powered	Yes	No	Separate Gripper Segment on Links
1972	2226	Payoff	Link	4	16	18.5	20	28	15,000	Powered	No	No	Elastomer Sleeve
1972	2226	Coiling	Link	4	16	18.5	20	28	15,000	Powered	No	No	Same as Payoff Reel - Elastomer Sleeve
1972	2233	Both	Wedge	2	5.94	6.25	N/A	35	1000	Powered	No	No	2 Mandrels - Paper Winder/Unwinder
1972	2255	Coiling	Link	3	15.3	16	N/A	40	30,000	Powered	Yes	No	Saloon Door - Separate Gripper Segment on Links
1973	2341	Payoff	Link	4	15	16.25	N/A	16	2000	Manual	No	No	
1973	2341	Coiling	Wedge	3	7.56	8.06	12	16	2000	Manual	No	No	Saloon Door
1973	2355	Payoff	Link	4	15.5	18.5	N/A	30	12,000	Powered	No	No	Slot for C-Hook
1974	2190	Payoff	Link	4	14.75	16.75	N/A	13	3300	Powered	No	No	2 Mandrels
1974	2190	Coiling	Wedge	6	18.38	19.68	N/A	15	3300	Powered	No	No	
1974	2265	Coiling	Link	3	15	16	N/A	16	2800	Manual	No	No	4 Mandrels - Saloon Door - Leaf Springs
1974	2280	Payoff	Link	4	18	20.5	N/A	26	10,000	Powered	No	No	2 Mandrels
1974	2280	Coiling	Link	4	18	20.5	N/A	26	10,000	Powered	No	No	Same as Payoff Mandrel
1975	2207A	Payoff	Link	4	18	20.5	N/A	20	5500	Powered	No	No	2 Mandrels

Expanding Mandrels

Designed and Built by A•D•S Machinery Corp.

Year	Job	Application	Type	Number Segments	Collapse Diameter (inches)	Expand Diameter (inches)	Lagging Diameter (inches)	Face (inches)	Coil Weight (pounds)	Expansion	Gripper	Outboard Bearing	Remarks
1975	2207A	Coiling	Link	4	18	20.5	N/A	20	5500	Powered	No	No	Same as Payoff Mandrel
1975	2207B	Payoff	Link	4	18	20.5	N/A	20	5500	Powered	No	No	2 Mandrels
1975	2207B	Coiling	Link	4	18	20.5	N/A	20	5500	Powered	No	No	Same as Payoff Mandrel
1975	2208A	Coiling	Wedge	6	18.68	19.68	N/A	30	12,000	Powered	No	No	
1975	2208B	Payoff	Link	4	18	20.5	N/A	30	12,000	Powered	No	No	2 Mandrels
1975	2208B	Coiling	Wedge	6	18.68	19.68	N/A	30	12,000	Powered	No	No	
1975	2282	Payoff	Link	4	18	20.5	N/A	30	12,400	Powered	No	No	
1975	2320	Payoff	Link	4	18	20.5	N/A	30	12,100	Powered	No	No	2 Mandrels
1975	2320	Coiling	Wedge	3	18.81	19.68	N/A	30	12,100	Powered	No	No	
1975	2391	Payoff	Link	4	18	20.5	N/A	48	20,000	Powered	No	No	2 Mandrels
1975	2391	Coiling	Wedge	3	18.81	19.68	N/A	48	20,000	Powered	No	No	
1975	2430	Coiling	Wedge	3	11.12	12.25	16	22	4500	Manual	Yes	No	Modified to Double Toggle Linkage Mechanism
1975	2442	Payoff	Link	4	19.5	23	24	40	30,000	Powered	No	No	
1976	2515	Payoff	Link	4	11.12	13	N/A	14	1000	Manual	No	No	
1976	2550	Payoff	Wedge	4	18.5	21.25	24	48	20,000	Manual	No	No	Springs in Radial Segment Guides
1976	2721	Payoff	Wedge	4	5.75	6.25	N/A	18	1400	Manual	No	No	
1977	2332	Payoff	Wedge	4	15.5	20.5	N/A	32	15,000	Powered	No	No	2 Mandrels
1977	2332	Coiling	Wedge	3	19.5	20	N/A	30	15,000	Powered	Yes	No	2 Mandrels - Saloon Door
1977	2478	Payoff	Link	5	15	18	20	30	8000	Powered	No	No	
1977	2478	Coiling	Link	3	15.5	16	N/A	30	8000	Powered	No	No	
1977	2657	Coiling	Link	3	19.5	20	N/A	20.5	6000	Manual	No	No	Saloon Door - Link Type Radial Segment Guide
1977	2787	Payoff	Link	4	22.25	25	N/A	103	7000	Powered	No	No	Link Type Radial Segment Guide
1977	2787	Coiling	N/A	N/A	N/A	30	N/A	102	7000	N/A	No	Yes	Coils Wound on Removable Solid Block
1977	2891	Payoff	Wedge	4	15.5	20.5	N/A	32	17,000	Powered	No	No	
1978	2696	Payoff	Wedge	4	18.5	21	N/A	50	27,500	Powered	No	No	2 Mandrels
1978	2696	Coiling	Wedge	3	19.5	20	N/A	50	27,500	Powered	Yes	No	Saloon Door
1978	2786	Payoff	Link	4	15	18	18/21	35	13,000	Powered	No	No	
1978	2925	Coiling	Wedge	3	19.25	20	N/A	34	10,000	Powered	Yes	No	Separate Gripper Segment on Links
1978	2963	Coiling	Screw	3	14.5	15	N/A	7.25	2000	Manual	Yes	No	2 Mandrels - Saloon Door - Manual Gripper

Expanding Mandrels

Designed and Built by A•D•S Machinery Corp.

Year	Job	Application	Type	Number Segments	Collapse Diameter (inches)	Expand Diameter (inches)	Lagging Diameter (inches)	Face (inches)	Coil Weight (pounds)	Expansion	Gripper	Outboard Bearing	Remarks
1978	2982	Coiling	Screw	3	15.5	16	N/A	4	900	Manual	Yes	No	Saloon Door - Manual Gripper - Slot for C-Hook
1978	3074	Payoff	Link	4	16	18.5	N/A	29.6	15,000	Powered	No	No	
1979	2619	Payoff	Link	4	18.5	21	24	38	30,000	Powered	No	No	
1979	2649	Payoff	Wedge	4	15.5	20.5	N/A	32	17,000	Powered	No	No	
1979	2668	Coiling	Link	3	17.5	18	N/A	30	12,000	Powered	Yes	No	Saloon Door
1979	2964	Payoff	Link	4	15	18	20	31	8000	Powered	No	No	2 Mandrels
1979	2964	Coiling	Link	3	15.5	16	N/A	36	8000	Powered	Yes	No	Saloon Door
1979	3014	Payoff	Wedge	4	19.5	24.5	N/A	60	25,000	Powered	No	No	
1979	3014	Coiling	Wedge	3	19.5	20	N/A	54	25,000	Powered	Yes	No	
1979	3172	Payoff	Link	4	15	16.25	N/A	14	5,000	Manual	No	No	
1979	3200	Payoff	Link	4	11	12.25	16	16	25,600	Manual	No	No	
1980	2644	Payoff	Link	4	14.5	17	20	20	8300	Powered	No	No	
1980	2644	Coiling	Wedge	3	15.5	16	20	18	8300	Powered	Yes	No	Saloon Door
1980	3126	Payoff	Link	4	11.5	13	12,14,16,&20	20	3500	Powered	No	No	
1980	3126	Coiling	Link	4	13	14.5	N/A	20	3,500	Powered	No	No	Payoff Type Mandrel
1980	3207	Payoff	Wedge	4	15	19	N/A	30	12,000	Powered	No	No	Holes in Segments to Accommodate Expansion Range
1980	3211	Coiling	Wedge	3	5.79	6	10 thru 27	3.6	2000	Powered	No	No	Used with Winding Forms for Transformer Cores
1981	3192	Coiling	Link	3	15.5	16	N/A	31	13,000	Powered	Yes	No	Saloon Door
1981	3357	Payoff	Link	4	18.5	21	N/A	18	8000	Powered	No	No	
1981	3357	Coiling	Wedge	3	19.5	20	N/A	18	8000	Powered	Yes	No	Saloon Door
1981	3519	Coiling	Link	3	19.5	20	N/A	14	6500	Powered	Yes	No	Saloon Door
1981	3530	Coiling	Wedge	3	19.5	20	24	44	30,000	Powered	Yes	No	Saloon Door
1982	3581	Payoff	Wedge	4	18.5	21	N/A	51.5	25,000	Powered	No	No	2 Mandrels
1982	3581	Coiling	Wedge	3	19.5	20	N/A	50	25,000	Powered	Yes	No	Saloon Door
1983	3730	Payoff	Wedge	4	18	24	N/A	67	13,200	Powered	No	No	
1983	3730	Coiling	Wedge	6	22.68	23.62	N/A	65	13,200	Powered	Yes	No	
1983	3861	Coiling	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Manual Gripper Addition to Existing Segment
1984	3834	Payoff	Wedge	4	17.3	20.9	24	72	23,100	Powered	No	No	
1984	3834	Coiling	Wedge	6	19.6	20	N/A	72	23,100	Powered	Yes	No	

Expanding Mandrels

Designed and Built by A•D•S Machinery Corp.

Year	Job	Application	Type	Number Segments	Collapse Diameter (inches)	Expand Diameter (inches)	Lagging Diameter (inches)	Coil		Expansion	Gripper	Outboard Bearing	Remarks
								Face (inches)	Weight (pounds)				
													Used with Winding Forms for Transformer Cores
1984	3977	Coiling	Wedge	3	5.79	6	8 thru 16	3.6	2500	Powered	No	No	
1984	5009	Payoff	Link	4	13.5	17.5	N/A	19	7000	Powered	No	No	
1984	5009	Coiling	Wedge	3	15.5	16	20	19	7000	Powered	No	No	
1984	5017	Payoff	Link	4	18	21	N/A	28	12,000	Powered	No	No	Separate Gripper Segment on Links
1984	5017	Coiling	Wedge	3	19.25	20	N/A	26	12,000	Powered	Yes	No	4 Mandrels
1984	5081	Payoff	Link	4	14.5	17	N/A	32	15,000	Powered	Yes	No	4 Mandrels - Saloon Door - Gripper Slot Only
1984	5081	Coiling	Wedge	3	15.5	16	N/A	24	15,000	Manual	No	No	Holes in Segments to Accommodate Expansion Range
1984	5099	Payoff	Wedge	4	15.5	20	N/A	32	17,000	Powered	No	No	Payoff Type Mandrel
1984	5133	Coiling	Link	4	13	14.5	N/A	20	3500	Powered	No	No	
1985	5226	Coiling	Link	3	19	19.68	N/A	19	5500	Powered	Yes	No	Saloon Door - Manual Gripper
1985	5245	Coiling	Wedge	3	15.5	16	20	18	8000	Manual	No	No	Payoff Type Mandrel
1985	5252	Coiling	Link	4	15.5	16.5	N/A	25	9500	Powered	No	No	
1985	5281	Payoff	Wedge	3	15	18	N/A	22	8000	Powered	No	No	Saloon Door - Manual Gripper - Similar to 6138
1985	5335	Coiling	Wedge	3	11.5	12	16	28	12,000	Powered	Yes	No	2 Mandrels
1986	3833	Payoff	Wedge	4	18.9	20.86	N/A	72	23,100	Powered	No	No	
1986	3833	Coiling	Wedge	6	19.5	20	N/A	72	23,100	Powered	Yes	No	2 Mandrels - Payoff Type Mandrel
1986	5339	Coiling	Link	4	18.5	21	N/A	22	7000	Manual	No	No	2 Mandrels - Payoff Type Mandrel
1986	5467	Coiling	Link	4	15.5	20.5	N/A	22	8000	Powered	No	No	Similar to 5081 - Gripper Slot Only
1986	5532	Coiling	Wedge	3	15	16	N/A	24	15,000	Manual	Yes	No	
1987	5575	Payoff	Link	4	18.5	20.5	N/A	22	7,000	Powered	No	No	Quill Type Mandrel
1988	6080	Coiling	Wedge	6	16	16.5	N/A	64	50,000	Powered	No	No	
1989	5996	Payoff	Link	4	14.5	17	N/A	21	4,500	Powered	No	No	For Leader Strips - Complete with Side Plates
1989	5996	Coiling	Link	4	15	16	N/A	24	840	Manual	No	No	Double Stub Payoff Reel - Stepped for Two Diameters
1989	6078	Payoff	Wedge	4	19	21.5	24	13	40,000	Powered	No	No	2 Mandrels
1989	6138	Payoff	Wedge	3	15	16.75	20	46	40,000	Powered	No	No	Saloon Door - Similar to 5335
1989	6138	Coiling	Wedge	3	15.5	16	20	56	40,000	Powered	No	No	Holes in Segments to Accommodate Expansion Range
1990	6243	Payoff	Wedge	4	20.5	22.5	24	76	90,000	Powered	No	Yes	Same as Payoff Mandrel - Round Post Segment Guides
1990	6243	Coiling	Wedge	4	20.5	22.5	24	76	90,000	Powered	No	Yes	2 Mandrels
1991	6260	Payoff	Wedge	4	18.9	20.9	N/A	57	44,000	Powered	No	No	

Expanding Mandrels

Designed and Built by A•D•S Machinery Corp.

<u>Year</u>	<u>Job</u>	<u>Application</u>	<u>Type</u>	<u>Number Segments</u>	<u>Collapse Diameter (inches)</u>	<u>Expand Diameter (inches)</u>	<u>Lagging Diameter (inches)</u>	<u>Face (inches)</u>	<u>Coil Weight (pounds)</u>	<u>Expansion</u>	<u>Gripper</u>	<u>Outboard Bearing</u>	<u>Remarks</u>
1991	6260	Coiling	Wedge	6	19.3	20	N/A	52	48,500	Powered	Yes	No	
1991	6324	Payoff	Wedge	4	18.5	21	24	73	65,000	Powered	No	Yes	Holes in Segments to Accommodate Expansion Range
1991	6324	Coiling	Wedge	4	18.5	21	24	73	65,000	Powered	No	Yes	Same as Payoff Mandrel - Round Post Segment Guides
1991	6337	Payoff	Wedge	4	17.3	20.9	24	79	22,000	Powered	No	No	2 Mandrels - Holes in Segments
1991	6337	Coiling	Wedge	6	19.292	20	24	79	22,000	Powered	Yes	No	
1991	6366	Coiling	Wedge	6	16	16.5	N/A	64	50,000	Powered	No	No	Quill Type Mandrel
1991	6366	Coiling	Wedge	6	19.5	20	N/A	80	50,000	Powered	No	No	Quill Type Mandrel
1991	6384	Payoff	Wedge	4	18.9	20.9	24	55	55,000	Powered	No	No	
1991	6384	Coiling	Wedge	6	19.3	20	24	55	55,000	Powered	Yes	No	Double Gripper
1992	6524	Payoff	Link	4	18.5	20.5	N/A	18	5,500	Powered	No	No	2 Mandrels
1992	6524	Coiling	Wedge	3	19	19.7	N/A	20	5,500	Powered	Yes	No	Saloon Door
1992	6604	Payoff	Wedge	4	22.8	24.8	30	55	53,000	Powered	No	No	
1992	6604	Coiling	Wedge	3	23.2	24	N/A	54	53,000	Powered	Yes	No	Separate Gripper Segment on Links
1993	6686	Payoff	Wedge	3	9.34	10.34	N/A	16.7	5,500	Powered	No	No	Holes in Segments to Accommodate Expansion Range
1993	6686	Coiling	Wedge	3	19.2	20.2	N/A	16.7	5,500	Powered	No	No	Holes in Segments to Accommodate Expansion Range
1993	6793	Coiling	Wedge	3	15.6	16	N/A	16	1500	Manual	No	No	Saloon Door - Gripper Slot Only - Similar to 1769
1993	6873	Coiling	Wedge	3	5.79	6	12 thru 19	3.6	2,000	Powered	No	No	Used with Winding Forms for Transformer Cores
1994	6748	Payoff	Link	4	14.8	16.1	N/A	20	7,000	Powered	No	No	
1994	6748	Coiling	Link	3	15.2	15.75	N/A	20	7,000	Powered	Yes	No	Saloon Door
1994	6851	Payoff	Wedge	4	18.5	24.5	N/A	56	50,000	Powered	No	Yes	Holes in Segments to Accommodate Expansion Range
1994	6851	Coiling	Wedge	3	19.5	20	N/A	55	50,000	Powered	Yes	No	Separate Gripper Segment on Links
1994	6958	Payoff	Wedge	4	15	17	N/A	35	17,500	Powered	No	No	
1994	6958	Coiling	Wedge	3	15.5	16	N/A	36	17,500	Powered	Yes	No	Saloon Door
1994	6978	Payoff	Wedge	4	18.5	24.5	N/A	56	45,000	Powered	No	Yes	2 Mandrels - Holes in Segments
1994	6978	Coiling	Wedge	6	19.25	20	N/A	52	45,000	Powered	Yes	Yes	2 Mandrels
1995	6141	Payoff	Link	4	14.5	17	N/A	32	18,000	Powered	No	No	2 Mandrels
1995	6141	Coiling	Wedge	3	15.6	16	N/A	32	18,000	Powered	Yes	No	2 Mandrels - Saloon Door - Manual Gripper
1995	7109	Payoff	Wedge	4	17.16	20.68	N/A	21	?	Powered	No	No	For Sendzimir Mill
1995	7156	Payoff	Wedge	4	23	24.5	N/A	56	60,000	Powered	No	No	2 Mandrels

Expanding Mandrels

Designed and Built by A•D•S Machinery Corp.

Year	Job	Application	Type	Number Segments	Collapse Diameter (inches)	Expand Diameter (inches)	Lagging Diameter (inches)	Face (inches)	Coil Weight (pounds)	Expansion	Gripper	Outboard Bearing	Remarks
1995	7156	Coiling	Wedge	3	17	18	20	58	50,000	Powered	No	No	
1995	7697	Payoff	Link	4	15	16.5	20	29	10,000	Manual	No	No	
1995	7697	Coiling	Link	4	15	16.5	20	29	10,000	Manual	No	No	Payoff Type Mandrel
1995	7800	Payoff	Wedge	4	18.4	20.6	24	66	68,300	Powered	No	Yes	
1995	7800	Payoff	Wedge	4	18.4	20.6	24	55	68,300	Powered	No	No	
1995	7800	Coiling	Wedge	3	23	24	N/A	65	68,300	Powered	Yes	Yes	Separate Gripper Segment on Links
1995	7800	Coiling	Wedge	3	18.4	20	N/A	52	68,300	Powered	Yes	No	Separate Gripper Segment on Links
1996	6851S	Payoff	Wedge	4	18.5	24.5	N/A	56	50,000	Powered	No	Yes	Spare for 6851
1996	6851S	Coiling	Wedge	3	19.5	20	N/A	55	50,000	Powered	Yes	No	Spare for 6851
1996	6978S	Coiling	Wedge	6	19.25	20	N/A	52	45,000	Powered	Yes	Yes	Spare for 6978
1996	7742	Payoff	Wedge	3	15	16.75	20	66	60,000	Powered	No	Yes	2 Mandrels
1996	7742	Coiling	Wedge	3	19	20	24	65	60,000	Powered	No	Yes	
1996	7774	Both	Link	3	11.6	12	N/A	10	N/A	Manual	No	No	2 Mandrels - Special Vertical Shaft Units
1996	7774	Both	Link	3	15.7	16	N/A	10	N/A	Manual	No	No	2 Mandrels - Special Vertical Shaft Units
1996	7882	Coiling	Wedge	3	17.38	18	20	67	50,000	Powered	No	No	Payoff Type Mandrel - Elastomer Sleeve - Also See 10156
1997	7156S	Payoff	Wedge	4	23	24.5	N/A	56	60,000	Powered	No	No	Spare for 7156
1997	7156S	Coiling	Wedge	3	17	18	20	58	50,000	Powered	No	No	Spare for 7156
1997	7997	Payoff	Wedge	3	15	16.75	20	66	40,000	Powered	No	Yes	2 Mandrels
1997	7997	Coiling	Wedge	6	19	20	24	66	40,000	Powered	No	No	
1998	7997S	Payoff	Wedge	3	15	16.75	20	66	40,000	Powered	No	Yes	Spare for 7997
1998	7997S	Coiling	Wedge	6	19	20	24	66	40,000	Powered	No	Yes	Spare for 7997
1998	10097	Coiling	Wedge	3	17.38	18	20	67	50,000	Powered	No	No	Same as 7882
1998	10269	Payoff	Wedge	3	15	16.75	20	46	40,000	Powered	No	No	Spare for 6138
1998	10255	Payoff	Wedge	3	15.5	17.25	20	66	65,000	Powered	No	Yes	2 Mandrels
1998	10255	Coiling	Wedge	6	19	20	24	66	50,000	Powered	No	No	
1999	10156	Coiling	Wedge	3	17.38	18	20	67	50,000	Powered	No	No	Modification to 7882 Mandrel - Improved Guides and Lube
1999	10475	Coiling	Wedge	4	15.64	16.38	N/A	30	15,000	Powered	No	No	For Sendzimir Mill
2000	10223	Payoff	Wedge	4	28.5	30.5	N/A	51	60,000	Powered	No	No	2 Mandrels
2000	10414	Coiling	Wedge	6	19	20	N/A	54	50,000	Powered	Yes	No	

Expanding Mandrels

Designed and Built by A•D•S Machinery Corp.

Year	Job	Application	Type	Number Segments	Collapse Diameter (inches)	Expand Diameter (inches)	Lagging Diameter (inches)	Face (inches)	Coil Weight (pounds)	Expansion	Gripper	Outboard Bearing	Remarks
2000	10432	Coiling	Wedge	8	19	20	N/A	53	55,000	Powered	Yes	No	Dual Rocking Grippers - Replacement for 6851
2000	10557	Payoff	Wedge	3	17.5	20.5	N/A	48	40,000	Powered	No	Yes	2 Mandrels
2000	10616	Coiling	Wedge	3	17.38	18	20	67	50,000	Powered	No	No	Same as 10156
2001	10701	Payoff	Wedge	4	18.5	20.5	N/A	66	25,000	Powered	No	No	
2002	11401	Coiling	Wedge	4	15.64	16.38	N/A	30	15,000	Powered	No	No	Spare for 10475
2003	11579	Coiling	Wedge	4	15.55	16	20	30	10,000	Powered	Yes	No	Saloon Door with Separate Gripper Segment - Axial Spring
2004	11251	Payoff	Wedge	4	19	20.5	N/A	57	44,000	Powered	No	Yes	2 BF Mandrels - Coil Coating Line
2004	11601	Coiling	Wedge	8	19	20	N/A	57	40,000	Powered	Yes	No	Dual Rocking Grippers
2004	11788	Payoff	Wedge	3	15.5	17.25	20	66	65,000	Powered	No	Yes	Spare For 10255
2004	11789	Coiling	Wedge	6	19	20	24	66	50,000	Powered	No	No	Spare For 10255
2004	11857	Payoff	Wedge	4	17.5	20.5	N/A	54	44,000	Powered	No	Yes	Tension Leveling Line
2005	11410	Payoff	Wedge	4	21.5	25	N/A	62	60,000	Powered	No	Yes	Cast Steel Spider and Segments - Hardened
2005	11410	Coiling	Wedge	6	22.75	24	N/A	62	60,000	Powered	No	Yes	Cast Steel Spider and Segments - Hardened
2005	12063	Coiling	Wedge	6	19	20	24	58	30,000	Powered	Yes	No	Coil Coating Line
2006	12027	Payoff	Wedge	4	19.5	20.5	24.5	65	60,000	Powered	No	Yes	2 BF Mandrels - Coil Coating Line
2006	12027	Coiling	Wedge	6	19	20	24	65	60,000	Powered	No	Yes	Coil Coating Line
2007	12249	Payoff	Wedge	4	18.25	21	N/A	49.5	45,000	Powered	No	No	2 mandrels - 4140 hardened cast segments
2007	12249	Coiling	Wedge	6	16.5	17	20	54	40,000	Powered	Yes	No	2 mandrels - 4140 hardened cast segments - nitrided
2007	12249	Coiling	Wedge	6	19.5	20	N/A	56	40,000	Powered	Yes	No	4140 hardened cast segments - nitrided

331 Mandrels thru Job 12249