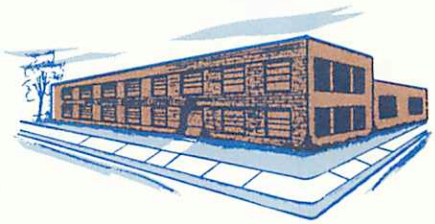

COIL WINDING EQUIPMENT CO., INC.

COWECO

P.O. BOX 660 — RAILROAD PLAZA, OYSTER BAY, NEW YORK 11771
TEL. (516) 922-5660 — Telex: 14-3128 COWECO NY Oyst.

February 1, 1987

Dear Friend:

In the past few months, we at COWECO have made many far reaching changes in management and in our sales objectives. Our new management pledges to keep COWECO as one of the leaders in coil winding machinery technology and development.

We have a staff of highly trained technicians and engineers, expert in the field of coil winding technology, ready to answer any questions you may have and to help you determine which of our machines would be best suited to your particular application.

Our current plans for trade show participation in 1987 are to exhibit at Nepcon West '87 (February 24-26) and Wescon '87 (November 17-19) on the west coast, Electro '87 (April 7-9) on the east coast and E/EIC & Coil Winding (October 5-8) in the Chicago area. We will have complimentary admission forms for most of these shows; please feel free to request whatever number you might utilize.

Our newest development is the Model KZ13-4 which will initially be demonstrated at the E/EIC show in Rosemont. The Model KZ13-4 is a new multi-spindle high speed machine capable of winding multi-section bobbins with accurate threading of wire through slots in section flanges. Using 3 axes programmable movements, the wire guides can move in each plane with great accuracy. The machine can be programmed to wrap terminals either parallel or perpendicular to the winding area at both ends of the bobbin and 180° around the bobbin.

We have enclosed a Machinery Checkoff List which gives technical information on many of our more popular standard models. If you would like to receive more detailed technical and pricing information on any machine, you can tear off the business card attached to it, circling the appropriate machine number corresponding to the machine of interest. The reply card is also a handy way to request our current Short Form Catalog and/or price list. The Short Form Catalog contains brief technical descriptions and illustrations of 24 of our more popular machines.

The reply card also provides you an easy way to solicit our recommendations and quotation (complete with production rate estimates) for any specific applications you may have, whether for new projects or those requiring recurring production runs. You can only gain by seeing if we can offer you substantial labor saving and cost saving with a new coil winding machine. And we do all the work in making this recommendation; you only have to fill in the blanks on the reply card. If you have many different applications for us to evaluate, just write us a memo or letter with exactly the same information.

You should also take a quick glance at the reply card to see if we have checked off the box **"Please keep me on your mailing list".** If the box is checked and you wish to remain on our mailing list, please fill out the card and return it to us.

Either through meeting you again at one of the trade shows, or by corresponding with you further or talking with you on the phone, we will look forward to renewing our acquaintance!

Be sure to send in your reply card!

Sincerely,

Joseph Pizzonia
President

JP:ym

Enc: Machinery Checkoff List/Show Card/Reply Card

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1946-1987 COWECO 41 YEARS OF SERVICE TO THE COIL WINDING INDUSTRY

MACHINERY CHECKOFF LIST

SPRING 1987

1. AL - Rugged, general purpose, low cost, coil and bobbin winder for wire sizes #7-#50 AWG (3.5 - 0.025 mm) on coils 3/16" - 14" (4.75 - 350 mm) in length and up to 10" (260 mm) in diameter at winding speeds between 383 and 5175 RPM. No cams or gears are required.

2. BRS - High precision continuous strip winder for flat, rectangular, or round strips up to 1/2" (12 mm) in diameter. Typically used for potentiometers and delay lines; can be supplied with tap puller and/or electronic programming for tapped delay lines & similar applications, as presently being demonstrated.

3. CK - Automated high production turret type coil and bobbin winder. Our completely automatic demonstrator is set up for a self-supporting coil, with spray solvent applicator, cutting and ejection.

4. CK-6M - High speed 6 spindle bobbin winder. Wire sizes #32-#56 AWG (0.2 - 0.013 mm) can be wound at 0 - 8000 RPM on coils up to about 2" (50 mm) in diameter and length. Adjustable cam and gear design ensures maximum precision. Coils with up to 4000 turns can be wound at up to 12 per minute. Models CK-4M and CK-8M are 4 and 8 spindle versions.

5. CS - Basic bobbin winder for coils 0 - 2" long using change gears and our high accuracy adjustable cams. Winding speeds 0 - 5000 RPM and wire sizes #22-#56 AWG (0.6 - 0.013 mm). Our Model C has a tailstock and slower speed/higher torque motor for winding #20-#56 AWG (0.8 - 0.013 mm) wire at 0 - 3000 RPM.

6. DL - General purpose coil and bobbin winder with dial-in adjustments to feed rate and stops adjusted for 3/16" - 4" (4.75 - 100 mm) winding lengths. Wire sizes #14-#50 AWG (1.6 - 0.025 mm) can be wound with selection of appropriate winding speed range: 0 - 2000, 0 - 4000, or 0 - 8000 RPM. Our Model DLS is the version of this machine without tailstock.

7. GH - Heavy duty rugged hand (guided) winder for wire sizes as large as #8 AWG (3.2 mm) on coils up to 12" (300 mm) in diameter (and yet larger wire diameters on smaller diameter coils) at the standard 0 - 35 RPM speed range. Speed range is quickly altered by sprocket changeover. Our Model GHS is the same machine without tailstock.

8. GLK - Automatic heavy duty turret-type coil and bobbin winder for wire sizes #14-#44 AWG (1.6 - 0.05 mm) and coils up to 3" (75 mm) long. Presently being demonstrated with automatic AMP terminal inserter which also cuts and strips leads. Eliminates the need to wrap lugs or do other terminating operations.

9. GTH-LSM - Heavy duty hook type toroid winder for #12 AWG (2 mm) and finer wire on cores 1 - 3" (25 - 75 mm) in O.D.. A new long stroke version has just been introduced for straight wire lengths up to 10 - 20' (3 - 6 meters). Heavy duty version for up to #8 AWG (3.3 mm) wire.

10. KLK-8M - High speed 8 spindle bobbin winder for coils with thousands of turns of fine wire. Wire sizes #32-#50 AWG (0.2 - 0.025 mm) can be wound at 0 - 6000 RPM on bobbins up to about 2" (50 mm) in diameter and 3" (75 mm) long on eight coils simultaneously while the operator services eight already-wound coils. No cams or gears are required and a two preset counter permits exact turns counts (no overrun). Up to 12 coils per minute.

11. KZ13-4 - New multi-spindle high speed machine capable of winding multi-section bobbins with accurate threading of wire through slots in section flanges. Using 3 axes programmable movements, the wire guides can move in each plane with great accuracy. The machine can be programmed to wrap terminals either parallel or perpendicular to the winding area at both ends of the bobbin and 180° around the bobbin.

12. LA-3 - New low cost motorized handwinder with predetermining electronic counter for wire sizes #18 AWG (1 mm) and finer and 0 - 3400 RPM. Similar machines are Model RH/1 (no predetermining counter, but even less expensive; available in both handpowered and motorized form), and Model LL which features both predetermining counter and tailstock.

13. MP - This low cost "one arm bandit" spews out close-wound or spaced single layer coils with up to 60 turns. One pull of the handle winds a complete coil with never a turns count error. Wire sizes #16 AWG (1.3 mm) and finer can be wound, at up to 8 coils/mintue.

14. P - Motorized single layer winder in which the turns can be close-wound or precisely spaced. It can be built to accommodate coils several times longer than the 6" (150 mm) standard capacity. It can also be provided with strip winding head and/or tap puller with electronic programming for tapped delay lines, potentiometers, and similar strip-wound applications.

15. SML-10 - Newest version of this machine incorporates computerized control of the winding process. Full screen monitor and keyboard allow the user to enter number of turns, turns per layer, pitch rate, winding speed, acceleration and deceleration rates, etc., as appropriate for the particular coil pattern. Patterns can be stored and recalled when it is desired to wind the same coil again. Non-linear pitches, tapered and pyramid-shaped windings, and multiple sectioned windings can be easily programmed. Unlimited external disk storage can be provided.

16. SMLK - Computerized turret type fly winder. This offshoot of our Model SML-10 combines maximum ease of changeovers and storage/retrieval of information with maximum automation and efficiency. Before now you had to choose high production or flexibility and ease of changeover; now you can have it all!

17. TH-LS - Precision "hook-type" toroid winder for wire sizes #20-#40 AWG (0.8 - 0.08 mm) and relatively short wire lengths. Three roller tables for automatic rotation of cores .085" - 1.25" (2.2 - 32 mm) in O.D.. Only about a 6 wire diameter residual I.D. after winding is required.

18. W - The most versatile coil winder in the world! A wide range of accessories is available to permit the winding of: single layer, multiple layer, bobbin-wound, universal (Pi wound), progressive universal, and bank-wound coils; on either a laboratory (R&D) or production basis. Cam and gear design insures precision and repeatability of coil setups.

19. WK - High production turret-type lattice or universal winder. Wire sizes #30-#46 AWG (0.25 - 0.04 mm) can be wound at 0 - 1600 RPM on coils up to 1" (25 mm) wide. Progressive universal winding attachment is optional.

20. #582 Motor Control - A bi-directional variable speed run and brake control for permanent magnet motors up to 1/4 HP. Model 582 offers low cost, high performance, and compact design, all combined in one package. A result of our newly expanded R&D department, we found this speed control so superior in every way to what we could buy that we had to offer it to the outside world! Be on the lookout for other new developments in motor controls, timing devices, and voltage and current converters from our Genesis Electronics Division!