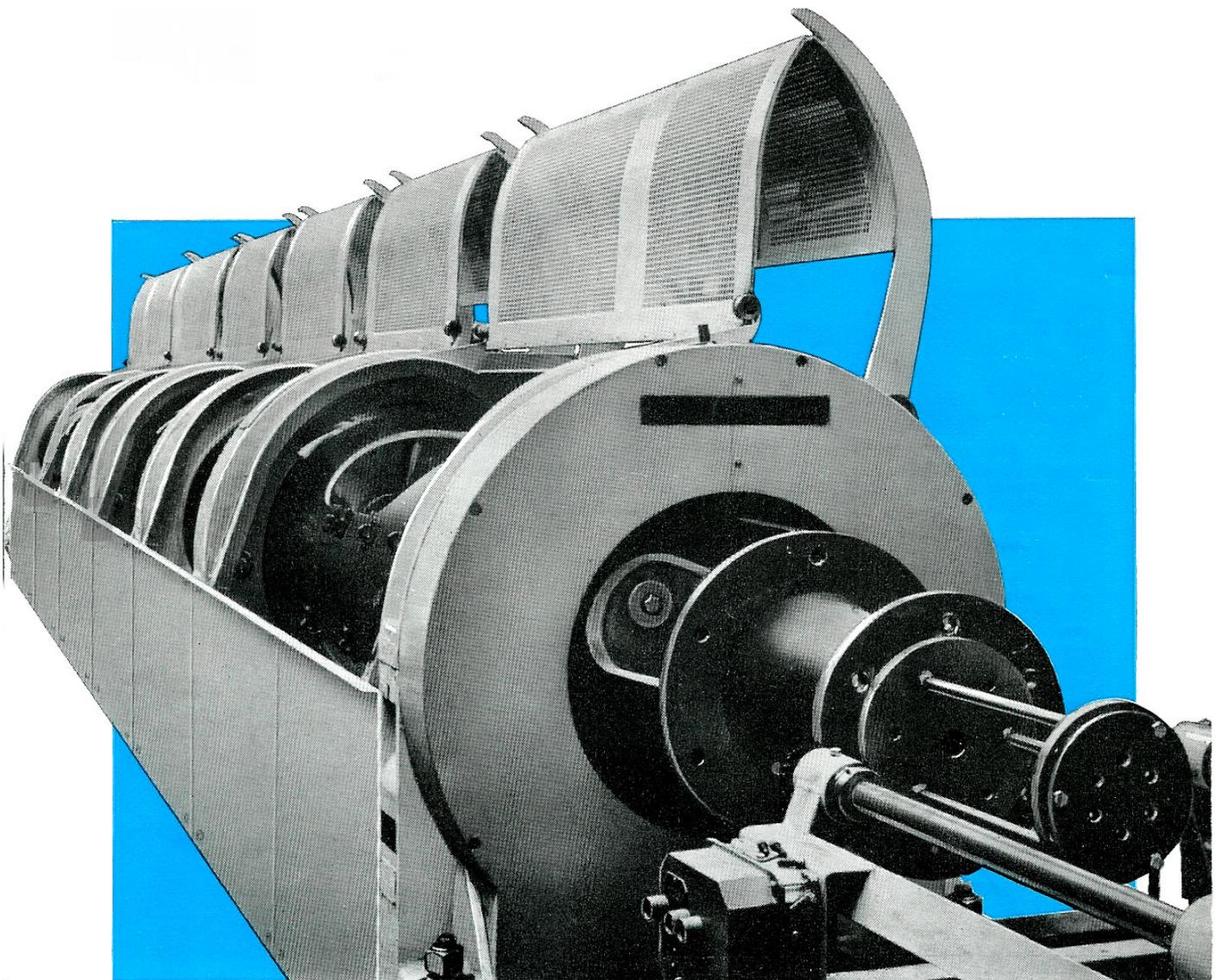


# Hanson & Edwards

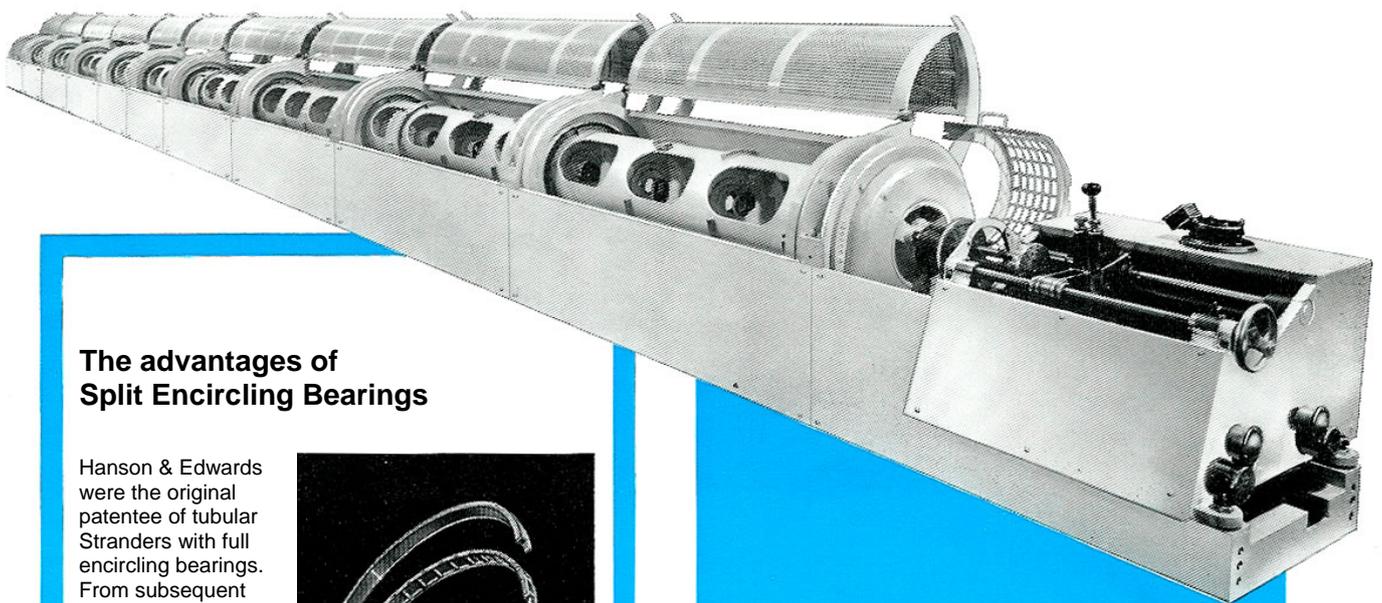
## High speed tubular stranders & closers for the wire rope and cable industries



# Hanson & Edwards

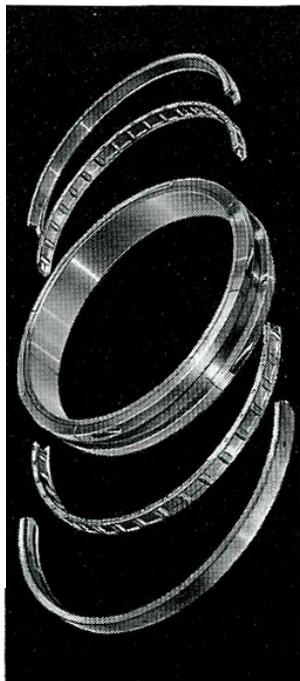
These machines are designed for the production of high tensile steel, copper and aluminium strands; the closing of wire ropes; the making of flattened strand and the assembly of insulated cable conductors.

The machines accept a range of bobbin diameters from 5in (125mm) to 40in (1000mm) and are constructed to accept from 2 to 50 within the rotor. Exact requirements can be varied to suit any particular need.

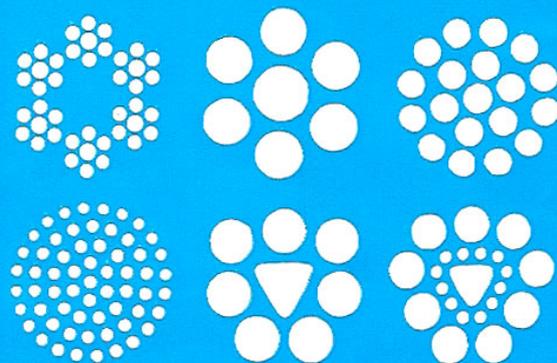


## The advantages of Split Encircling Bearings

Hanson & Edwards were the original patentee of tubular Stranders with full encircling bearings. From subsequent research and development has evolved the application of split encircling bearings especially for tubular stranders. This now well proven method of construction has resulted in quieter running at high speeds, extended life and a minimum of machine maintenance.



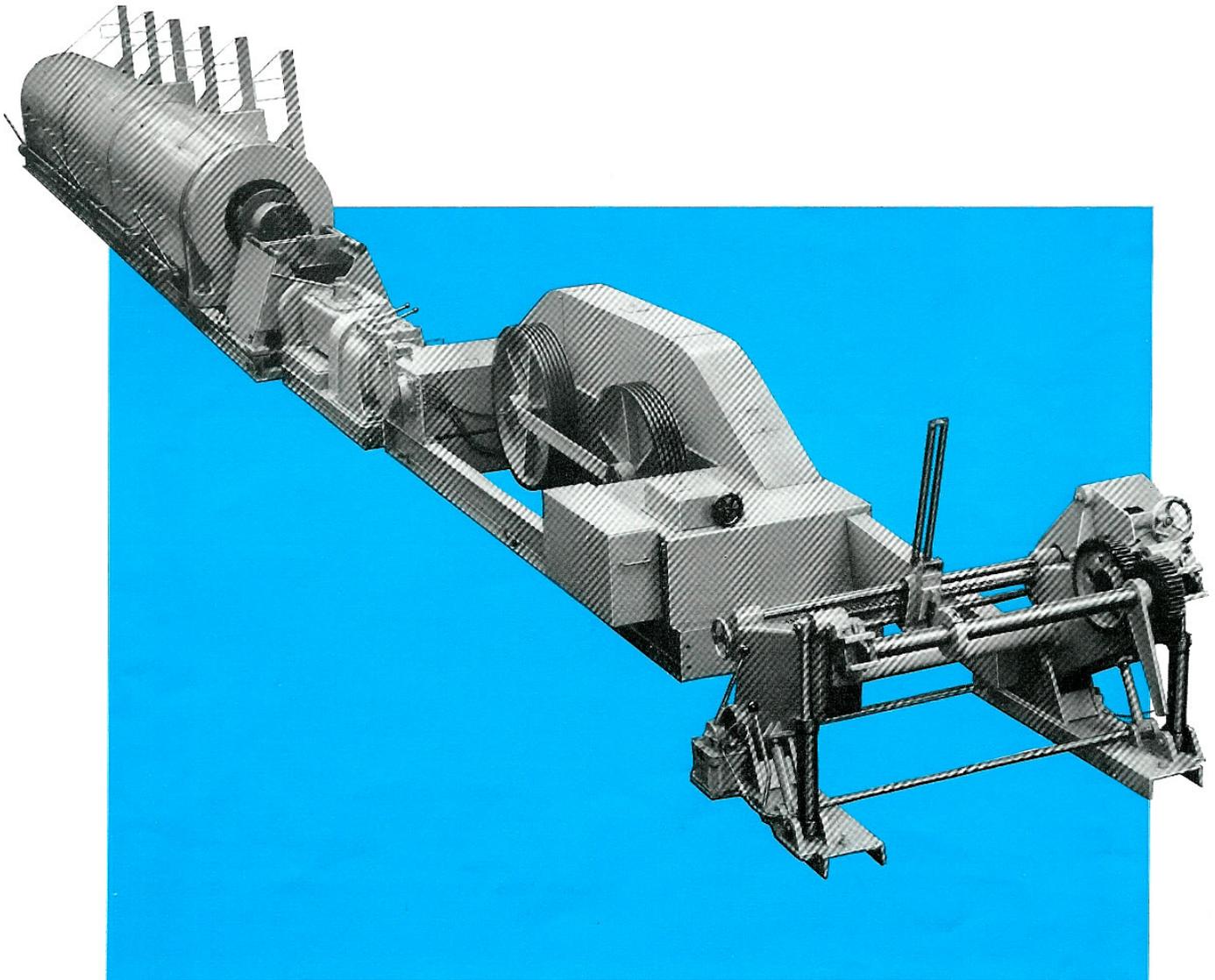
## Typical examples of Rope and cable construction

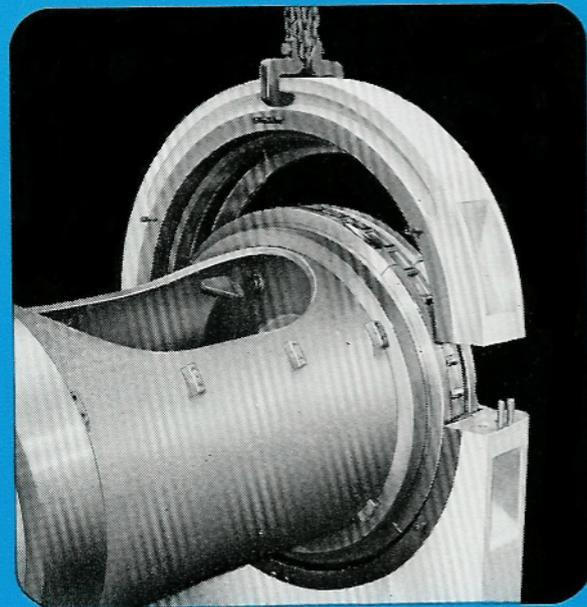
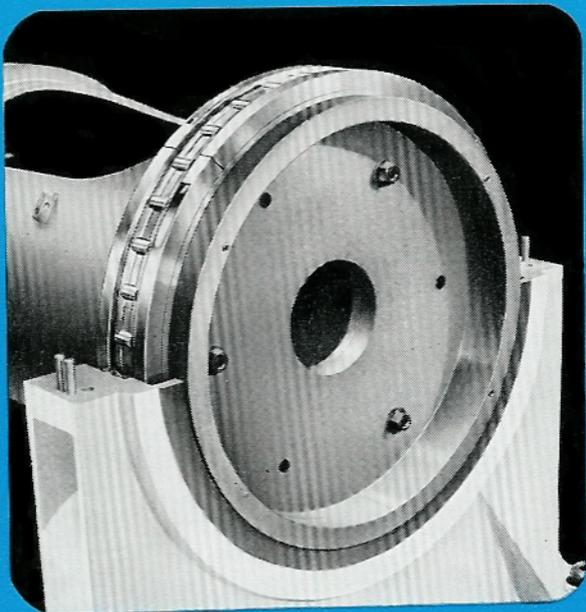
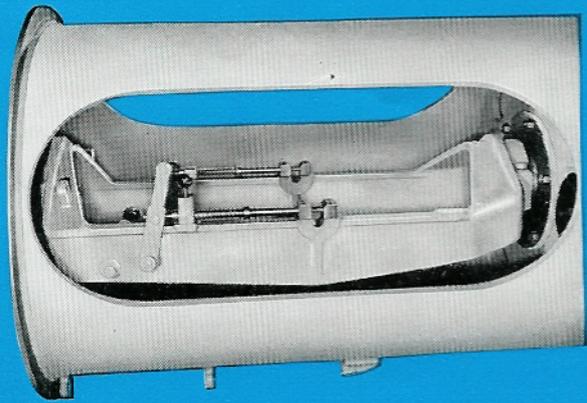


# High speed, high efficiency tubular stranders & closers

with split encircling bearing tube support

- \* Quicker installation
- \* Simple operation
- \* Smooth, quieter running at high speeds
- \* Maximum efficiency
- \* Minimum maintenance down-time
- \* Designed to meet specific requirements





# General Specification

## **Bases**

All rotor sections machines are constructed on heavy section rolled steel channel bases suitably braced and welded together.

## **Tubular Body**

The rotor body of the machine is constructed from appropriately sectioned steel tube. Port openings are correctly proportioned to provide maximum loading and unloading facilities.

During manufacture the tubes are dynamically balanced to the finest limits using modern techniques. The tube is supported in the strander on encircling split roller bearings. These provide a perfect operating medium for the high speeds and long operational life that are demanded of the

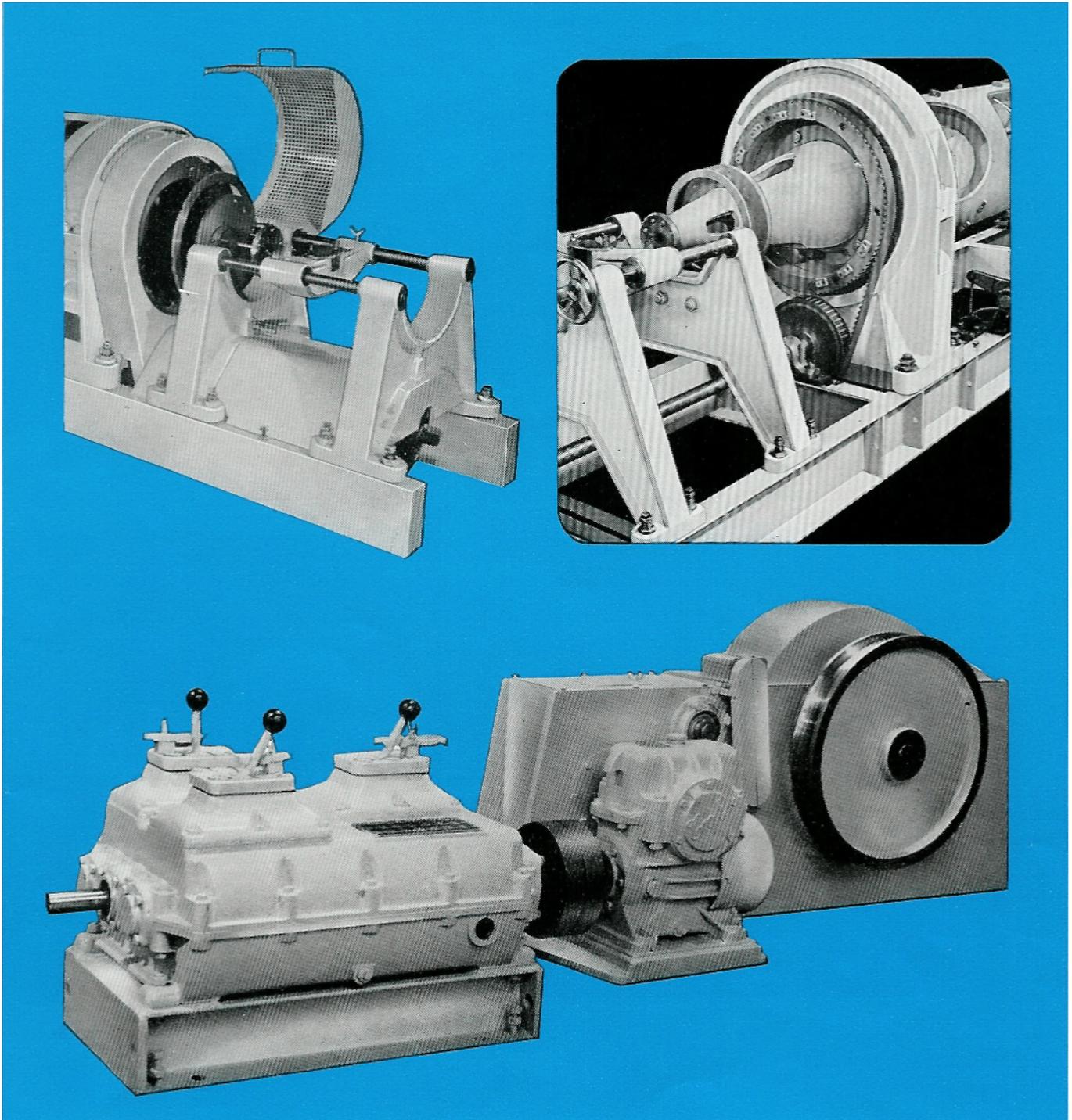
machines.

Whilst our recommendation would be for customers to seriously consider the split roller bearing design, we have for many years also manufactured, and can still supply, the tubular strander with non-metallic under rollers.

These rollers are amply proportioned and designed to give maximum life.

## **Cradles**

The Cradles are of best Cast Steel and are supported in heavy ball bearings in such a manner as to be readily removed from the rotor if necessary. The front of each cradle trunnion is bored for a well bell-mouthed tungsten carbide Wire Guide. The Cradles are each fitted with a special spring loaded latch to firmly secure the bobbin



spindle. The cradle supports are also of Cast Steel securely fixed to the rotor division plates.

#### **Brakes**

For standard applications, air operated disc brakes are supplied which take their power from the existing factory supply. Where this is not available, a small air compressor with reserve tank can be supplied as an additional item. The brakes are designed for easy maintenance and renewal of braking surfaces when necessary.

#### **Main Drive**

The drive to the rotor is normally by means of a reversible slip ring induction motor. Where different rotor speeds are required a gear box can be incorporated in the drive to give the desired speed ratios. The drive to the capstan is so arranged that the positive relationship between the machine and capstan is always maintained, thus ensuring no variation in the selected "lay".

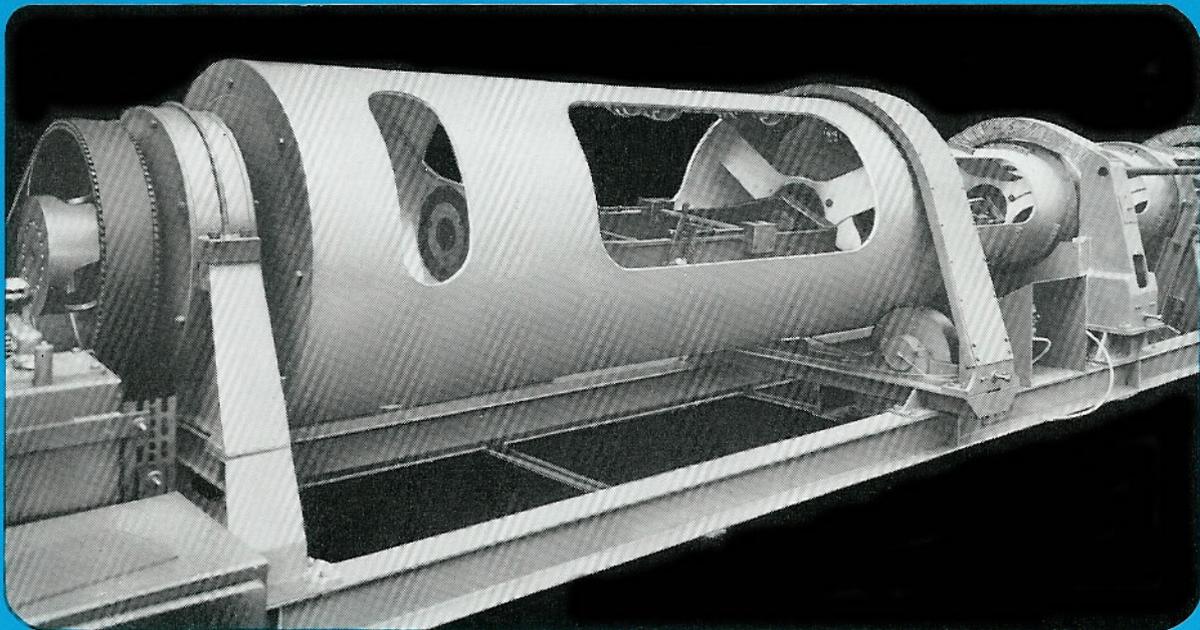
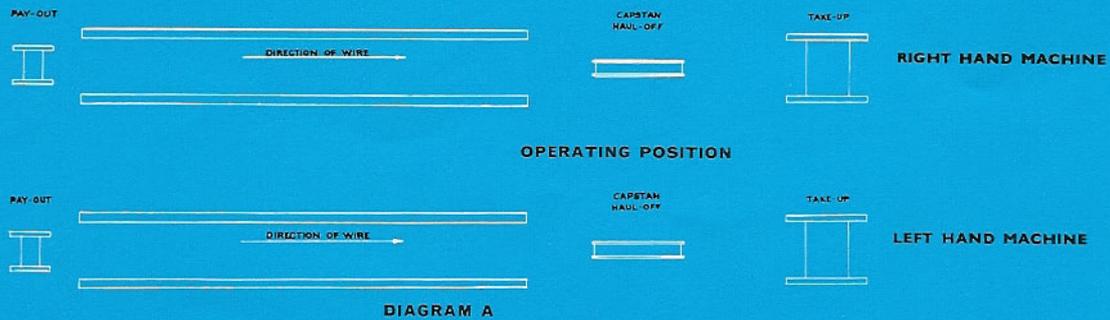
#### **Lay Plate and Die Box**

The Lay Plate is easily accessible and is provided with dies of tungsten carbide or other suitable material.

The die box is mounted on suitable bars with screw adjustment for placing the die in the correct position according to the lay of the wires.

#### **Haul-Off**

The haul-off capstan may be of the double self-fleeting type, the parallel drum type with fleeting ring, or double deep grooved capstan. Each is cast in a special grade of high quality iron chosen for its exceptionally hard wearing properties. A cantilever mounting of robust design facilitates access when threading up. Lay changes can be effected through change gears or by means of a manually controlled gearbox, whichever is preferred. A reversing box is also incorporated for right or left hand operation.



### Take-Up Stand

A range of take-up stands is available to suit any size of drum. The raising and lowering of take-up drums can be effected manually, or be power operated according to preference and weight to be lifted. Traversing mechanism for layering and finished strand is of proven design and a conventional slipping clutch is fitted to compensate for drum "build-up". The example shows a hand-actuated hydraulic lift model for a 48in (1220mm) diameter spool.

### Guards

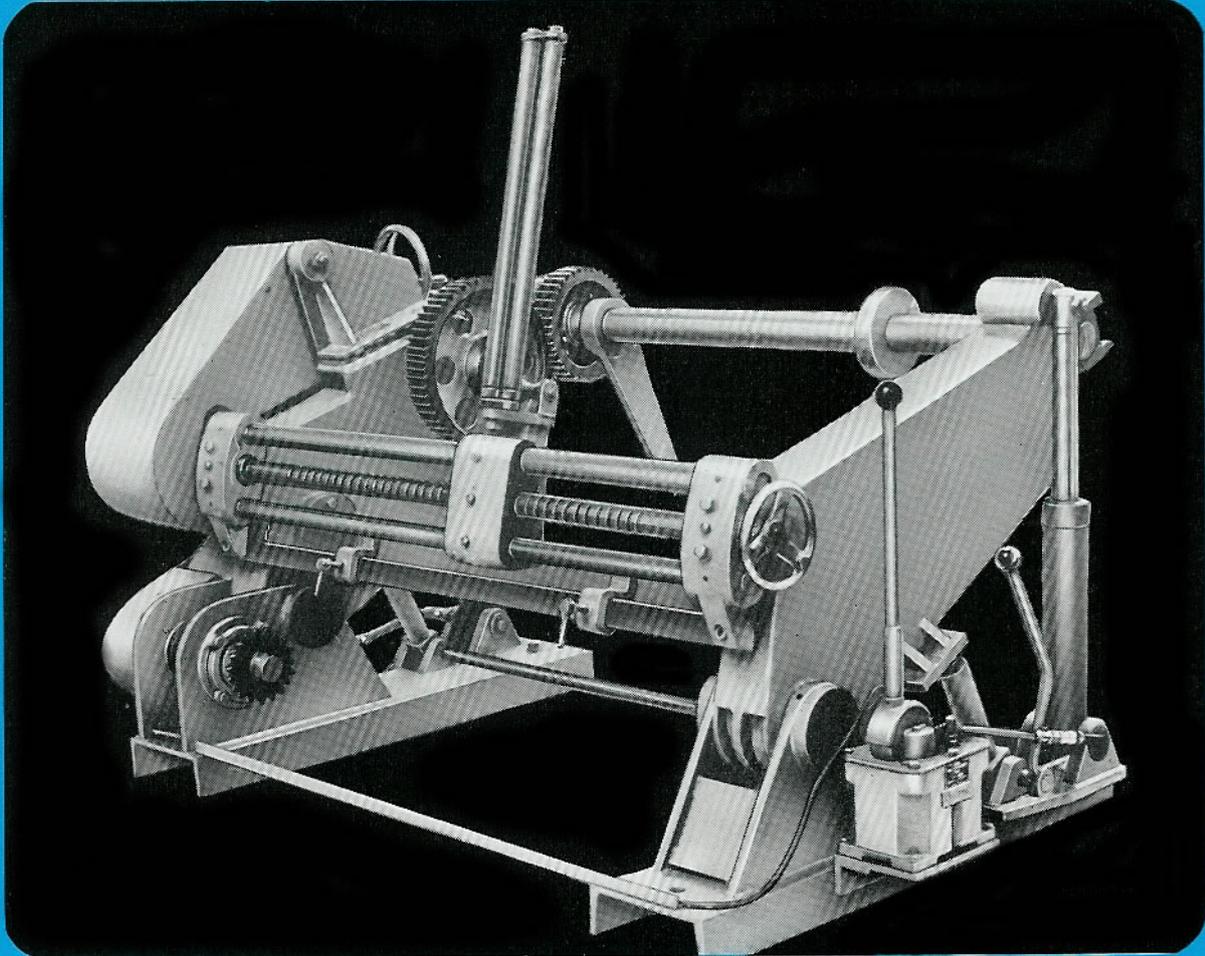
The rotor is enclosed with special design guards to ensure easy access to bobbins and minimise floor space. All other moving parts are suitably guarded by sheet metal or wire mesh guards. For machines with a large number of bobbins push button air operated guards can be supplied to facilitate loading and unloading of bobbins.

### Wire Guides

To guide the wire to the outside of the tube, tungsten carbide fairleads are fitted as standard equipment at all lead-up points. However, where preferred, pulleys or ceramic guides can be fitted. To facilitate ease of threading, all wire guides are tungsten carbide mounted on the outside of the tube to guide each wire effectively during its passage to the lay plate.

### Measuring unit

A five-figure re-set measuring device is fitted to all machines and, where desired, an electrical "pre-set" counter can be incorporated in the machine circuit to automatically stop the machine when the desired length of strand has been produced. The counter can be geared to register in feet, yards, fathoms, or metres, as preferred.



### **Stop motion**

The standard stop motion is of the "lashing" type and consists of a contact bar which runs full length of the machine. If a wire breaks it is thrown centrifugally outwards and makes contact with the bar. This immediately actuates the braking system and de-energises the driving motor. A "lashing" ring is provided at the nose to cater for wire breakages at this point.

### **Hand of machine**

Where floor space is at a premium, a customer may like the facility of one operator controlling two machines from a centre gangway, in which case we can supply both a right-hand machine and a left-hand machine according to requirements.

### **Testing**

Before a machine leaves our Works it is completely assembled and balanced. It then undergoes a period of

"running in" checks and finally a series of operational tests to ensure that every single item is working at maximum efficiency.

Customer's own inspection engineers are welcome at our Works to witness these tests.

### **Enlarged core section**

To meet specification requirements we can supply tubular stranders with enlarged core section at the nose of the machine. (Guards in example removed for clarity).

### **Optional equipment**

1. Totally enclosed guards
2. Base cover plates
3. Post-formers
4. Pre-formers

## Combination machines for Wire Rope

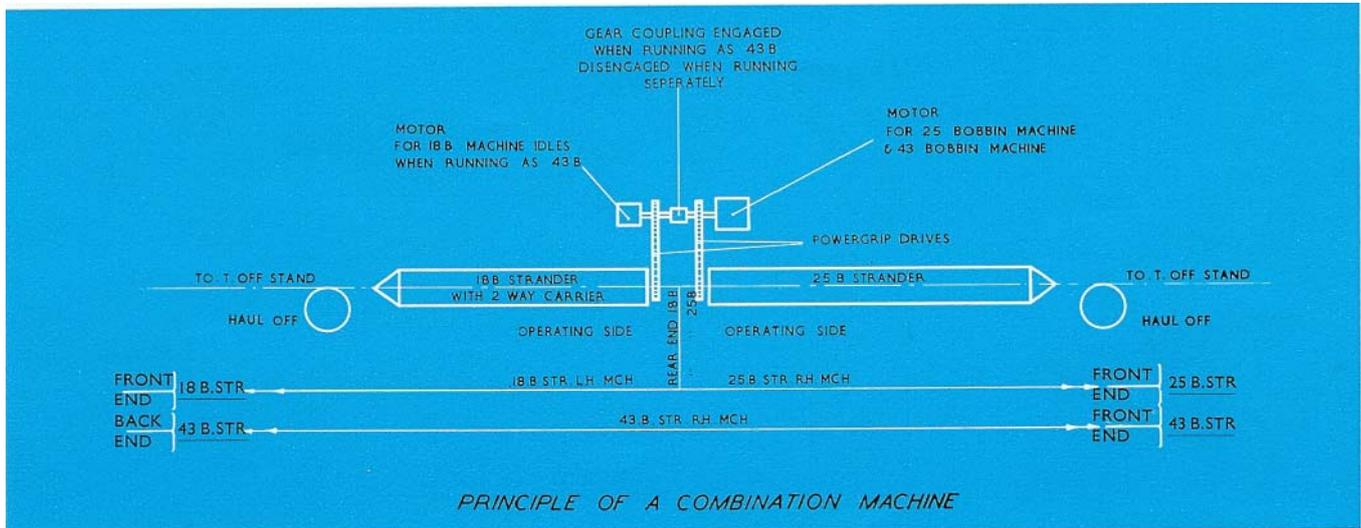
To meet the demands of the Wire Rope Industry for multi-wire machines we can now offer our combination machines. For example, the design enables one 25 wire machine and a 19 wire machine to operate as a single or they can be coupled in a matter of two or three minutes to operate as a single 44 wire machine. The design does not necessitate the insertion of an additional rotor section between the two machines.

Machines having differing numbers of bobbins to those previously mentioned can be combined in this manner,

similarly machines having equal or unequal bobbin sizes can be coupled together.

## Flattened strand machines

Our high speed flattened strand machines are now being used extensively throughout the Industry. They are specifically designed for the production of a strand with solid triangular cores and/or three wire cores. The speeds attained are comparable to the speeds of our normal round stranding machines.



## Customer enquiries

We strongly recommend that the following information be supplied to enable us to evaluate an enquiry correctly and in detail:

1. Indicate the number and submit certified drawings of all spools that are to be mounted in the rotors of the tubular strander or closer.
2. Should take-up drums be in existence, a certified dimensions drawing should be forwarded with the enquiry.
3. State the material and, if possible, maximum and minimum diameters of each individual wire or cable that will be made up into the required strand.
4. The type of capstan preferred.
5. The lay ranges required.
6. State whether a factory air supply is available.
7. Give details of the electrical supply in the factory and state whether a neutral wire is available.
8. The hand of the machine required; whether working from right to left or left to right.

## Our Cable and Wire Mill Machinery Division offers a comprehensive range of equipment including

Wire Drawing Machines  
Continuous Annealers  
Pre-extruder Annealers  
Continuous Spoolers  
Pay-offs  
Take-ups  
Continuous Coilers  
Pointers and Stringers

Drawbenches  
High-speed tubular stranders  
High-speed tubular closers  
Planetary Stranders  
Laying up machines  
Fixed Bobbin stranders  
Rewinders  
Bunchers  
Cold Weld Equipment

Vertical and Horizontal, continuous casting equipment  
High-speed tandem insulating lines comprising pay-off, wire drawing machine, annealing, extruding and continuous spooling or coiling. For the production of telephone cables and single core building wires.

## Disclaimer

Whilst we have endeavoured to ensure that the information contained herein is accurate, Hanson & Edwards and Beaumont Machinery do not accept responsibility for any errors or omissions. This specification is subject to amendment.

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Tel: 00 44 161 724 8989 Fax: 00 44 161 724 8855 E-mail: sales@beaumontmachinery.co.uk www.hansonedwards.co.uk