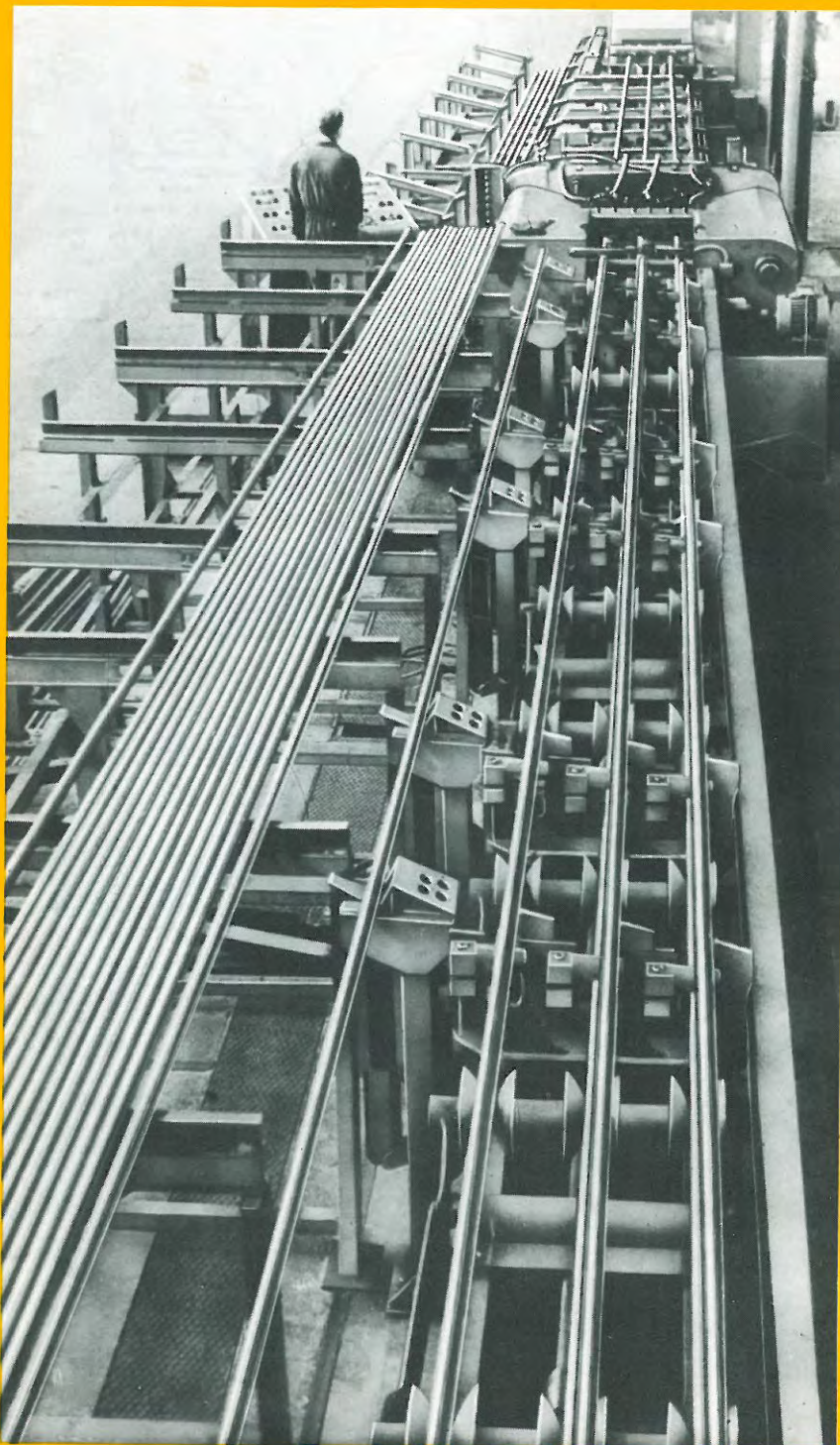


Farmer Norton

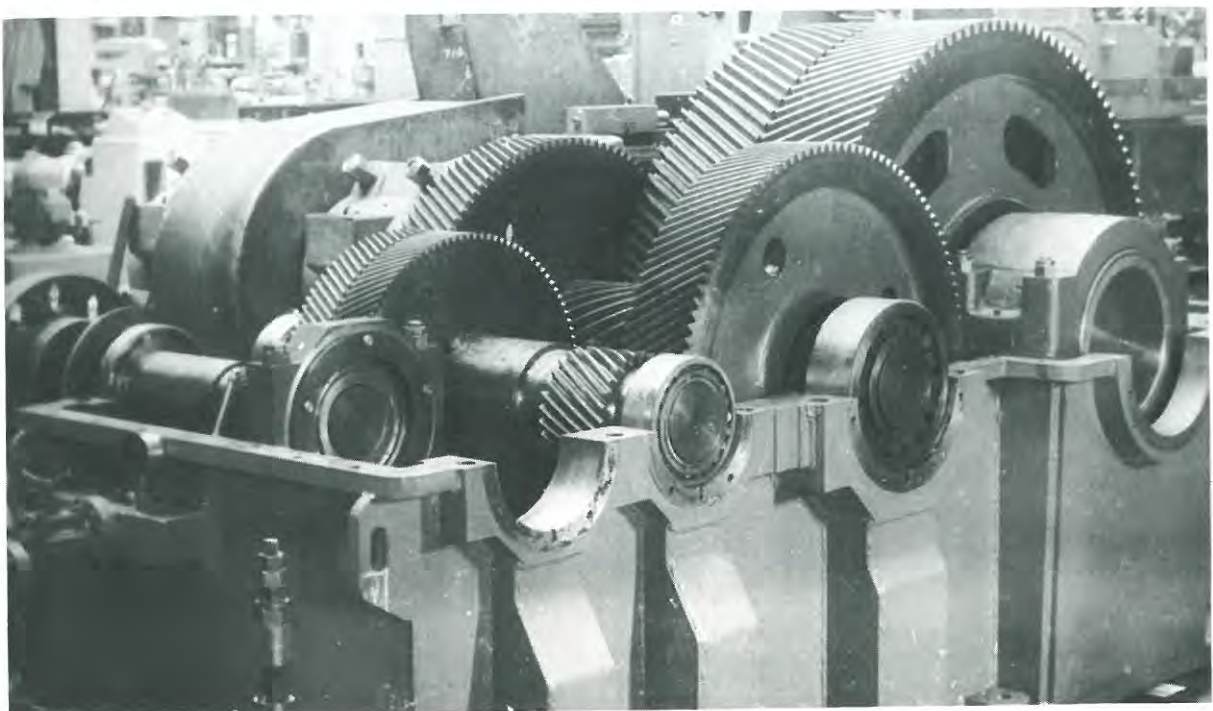


**bar
draw
benches**

As manufacturers of draw benches for the past 100 years, we have pleasure in presenting our latest range of Fully Automatic Bar Draw Benches from 1 to 150 tons pulling power with drawing speeds up to 300 feet per minute for production of bright drawn steel and non-ferrous bars of round, hexagon, square, flat and other sections.

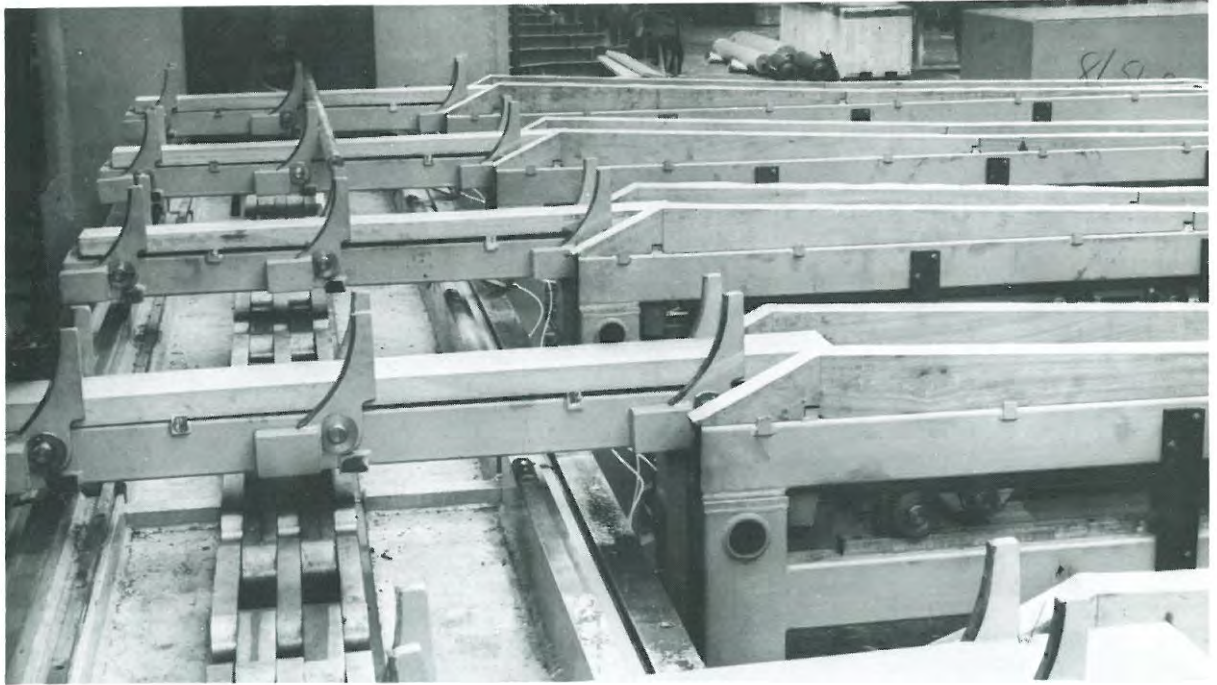
Lengths of draw benches are made to suit the individual requirements of the maximum length to be drawn.

BEDS	Heavy welded steel construction throughout. Made in easily transportable sections. Renewable mild steel wearing plates for chain and carriage tracks.
CHAINS	3 or 5 link type according to the power of the bench. Specially rolled high tensile alloy steel plates, ground alloy steel rivets. Hydraulic machine riveting ensures consistency throughout the whole of chain length.
SPROCKETS	High tensile alloy steel accurately machined all over. Mounted on large diameter forged steel shafts. Supported in large adjustable phosphor bronze bearings.
CHAIN DRIVE	By A.C. or D.C. Variable Speed Motor or A.C. Constant Speed Motor together with Dynamatic Slip Coupling. Either system giving slow "dogging-in" speed with rapid acceleration to pre-determined drawing speed.
MAIN DRIVE GEAR BOXES	<ol style="list-style-type: none">1. By totally enclosed worm gear unit.2. By single reduction double helical totally enclosed gear box.3. By double reduction double helical totally enclosed gear box (as illustration).4. By a combination of (1) and (2) or (1) and (3).5. When drive incorporates a Dynamatic Slip Coupling, it is usual to supply a multi-speed gear box in the main drive. Self contained pump lubrication to gear box.



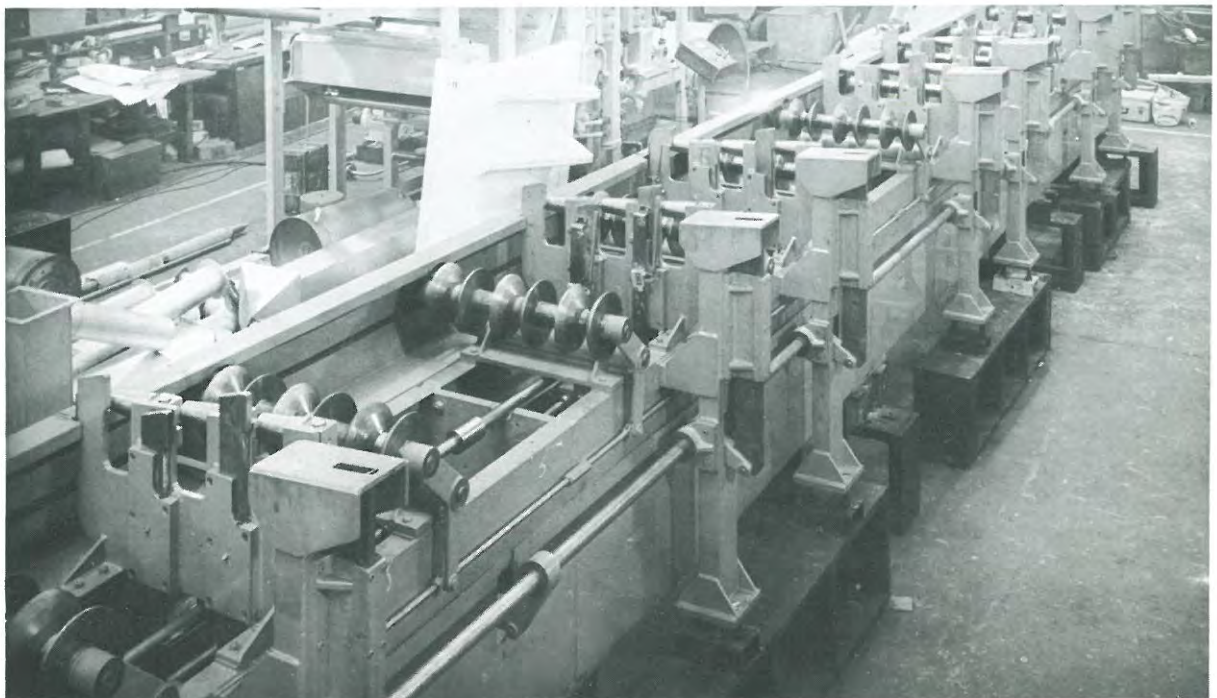
**BAR
UNLOADING**

Alternative arrangement by pneumatically operated retracting-type arms with a combined receiving stillage.



**BAR FEED
STILLAGES**

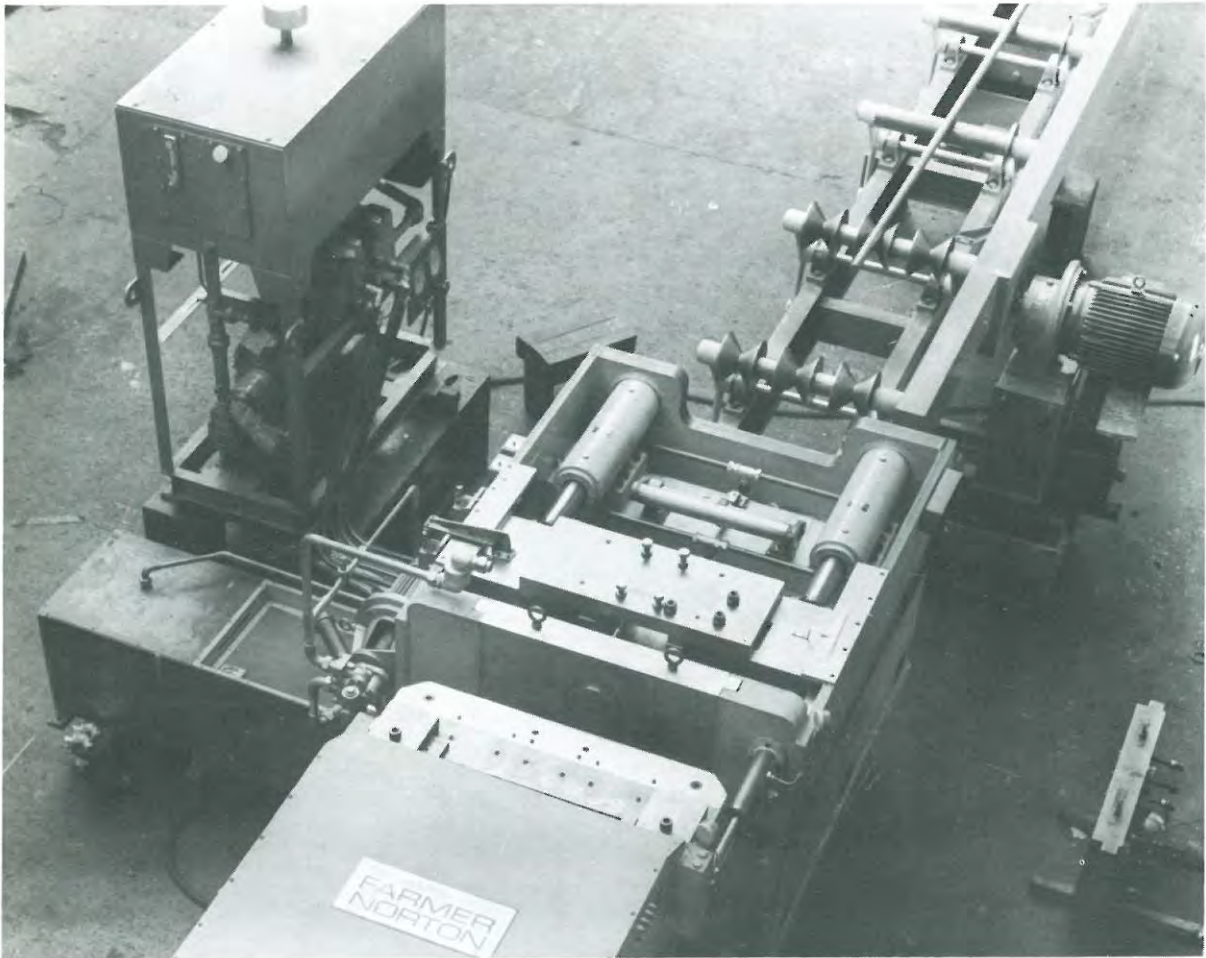
Manual or automatic bar feed stillages can be supplied.
Suitable for rounds, squares, hexagons, etc.
Single, double, or triple selection in automatic sequence.



DIEPLATES Forged steel machined all over. Spherically seated dieholders. Dieplates are interchangeable. Fitted with phosphor bronze wearing plates. Self contained pump lubrication to dies.

DIEPLATE FRAME Heavy welded fully normalised construction. Dieplate slide plate extends down to foundation.

HYDRAULIC PUSH POINTING UNIT Heavy welded fully normalised construction. Direct acting twin cylinders for push and independent pregrip cylinders. Length of stroke is infinitely variable between zero and maximum. Interchangeable hardened and ground alloy steel grippers. Grippers carried in "quick removal" cartridge units. Self contained hydraulic pump, tank and valve unit completely piped up.

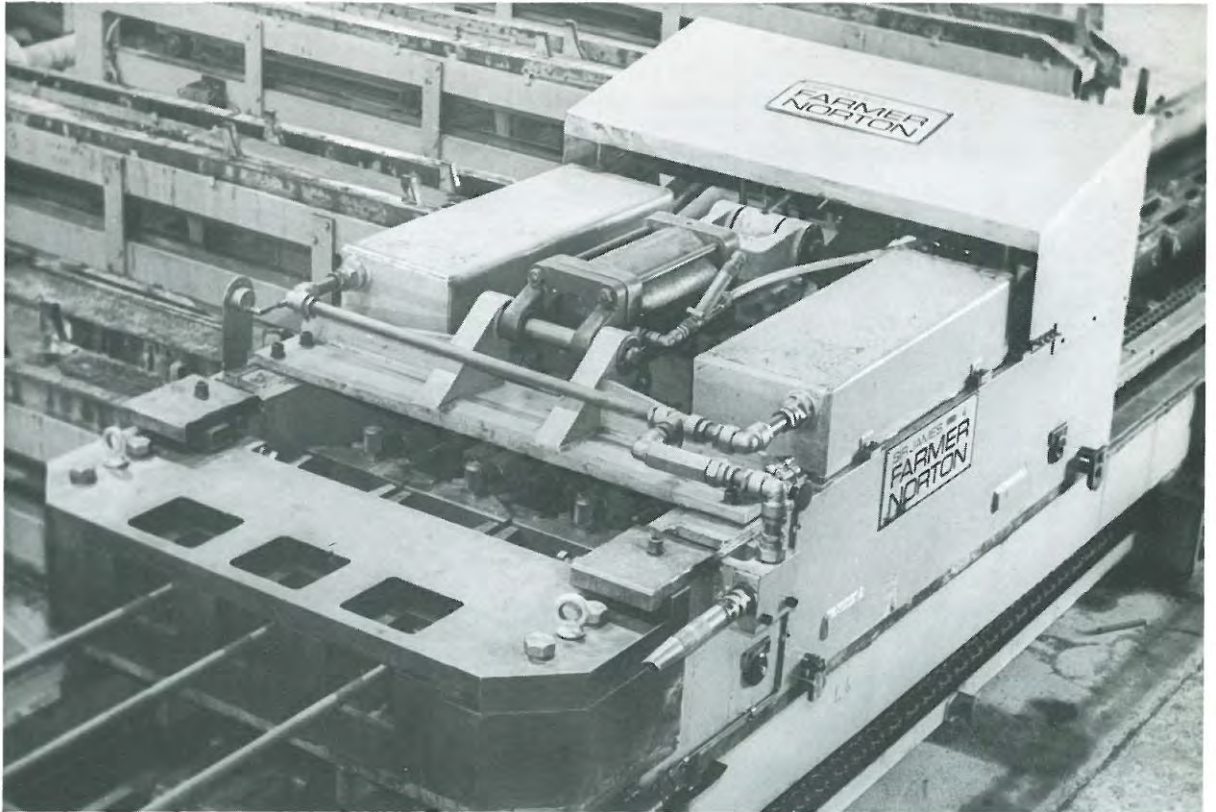


BAR UNLOADING By pneumatic tilting-type all steel arms depositing bars over the side of the bench into suitable cradles.



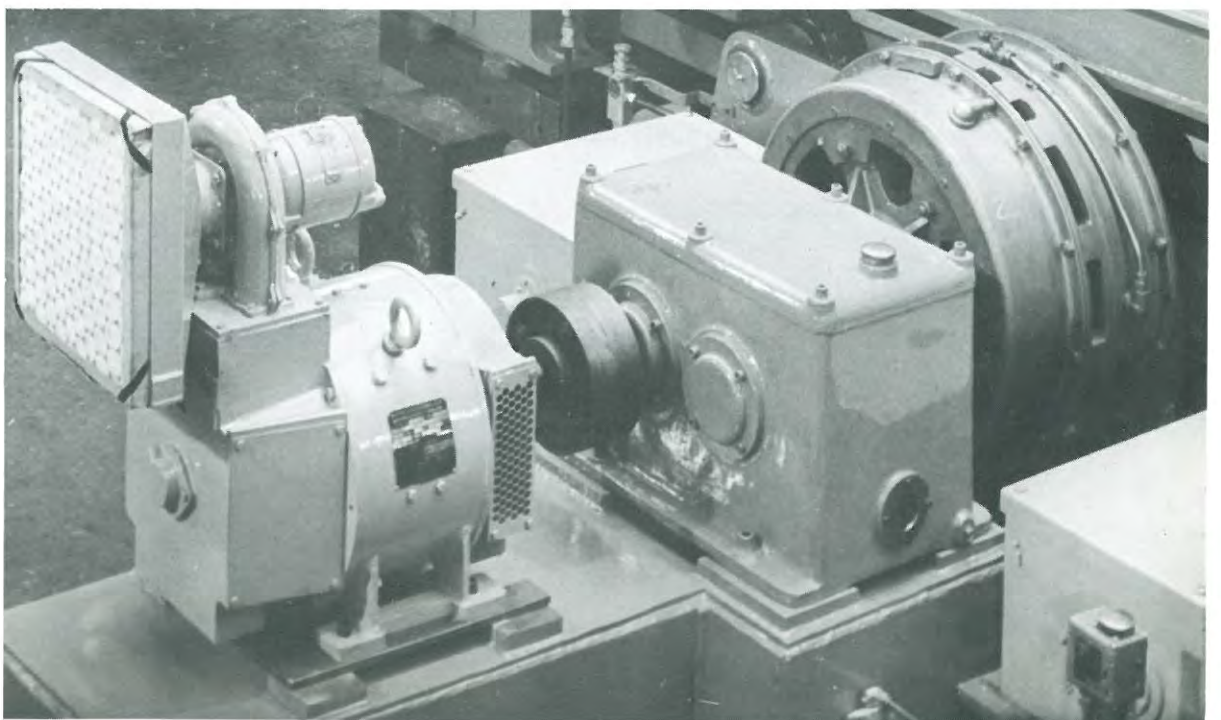
**DRAW
CARRIAGE**

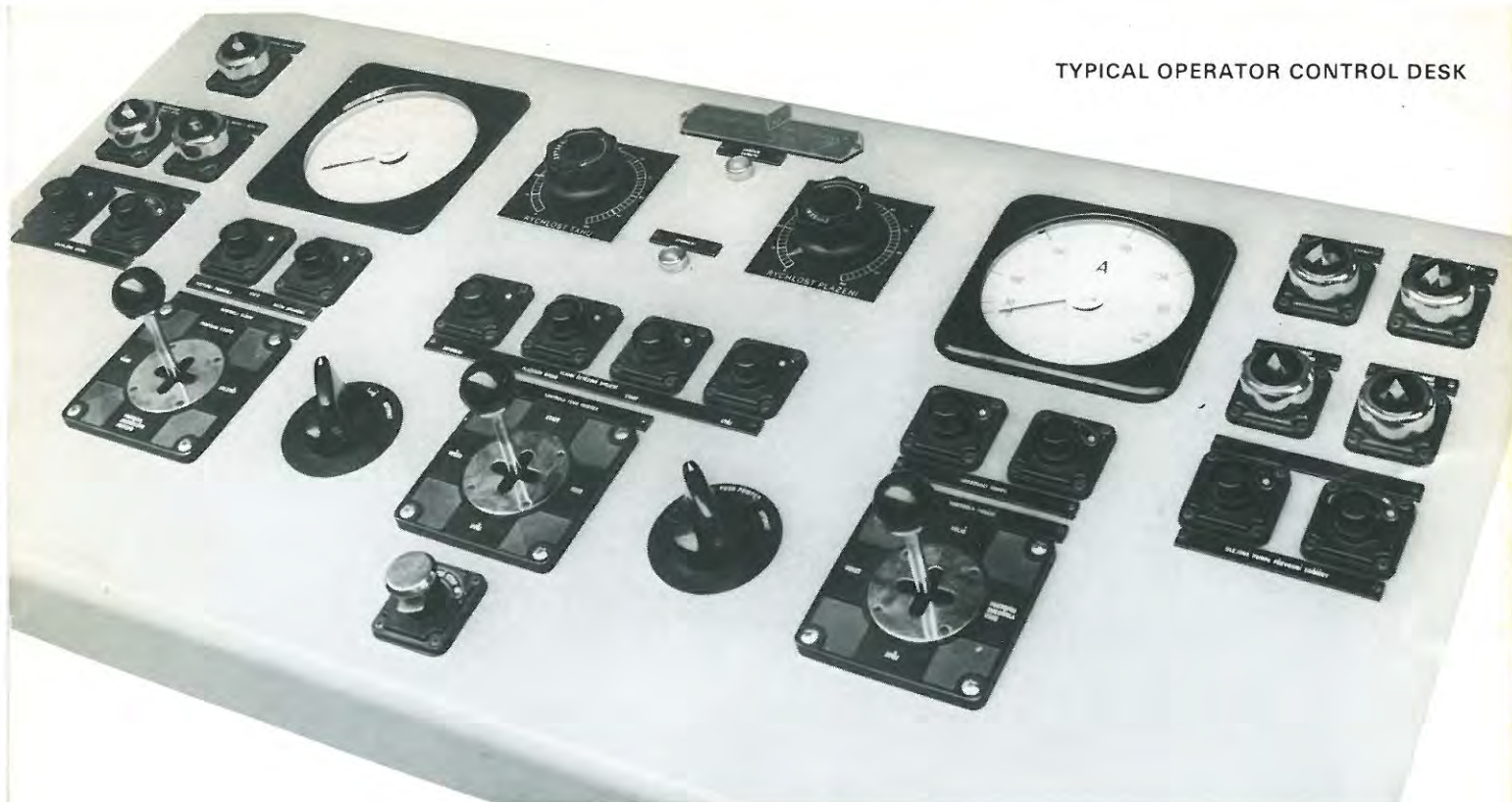
Heavy all steel welded construction. Forged steel hook. Interchangeable hardened alloy steel jaws. Automatic simultaneous gripping of 1, 2, or 3 bars. Gripping **DOES NOT** rely upon impact of carriage with dieplate. Automatic coupling to air supply at the dieplate. Positive hooking in. Air reservoirs automatically replenished eliminating the need for trailing air hose.



**CARRIAGE
RETURN**

By independent 2 speed geared motor with dynamic braking. Return speeds up to 400 ft. per min. Dual endless chain within width of bed. Hydraulic tensioning in both directions.





Capacity Chart

PULLING POWER OF DRAW BENCH		Lbs.	25,000	35,000	50,000	70,000	100,000	140,000	200,000
		Tons	10	15	20	30	45	60	90
		Kilo	10,200	15,300	20,400	30,600	45,900	61,200	91,800
CAPACITY MILD STEEL BAR (ROUND) or EQUIVALENT CROSS SECTIONAL AREA	Single Draw	Inch	1	1½	2	2½	3	4	6
		M/m	25	38	50	63	76	100	150
	Double Draw	Inch	5/8	1	1¼	1½	2	2¼	2¾
		M/m	16	25	32	38	50	57	70
	Triple Draw	Inch	—	½	11/16	7/8	1 1/16	1½	2
		M/m	—	12.5	17	22	27	38	50

THE MACHINES ILLUSTRATED and described in this leaflet cover the most modern Automatic Draw Benches for bar production in the Ferrous and Non-Ferrous Industry.

In addition to these we also manufacture complete ranges of:—

- ★ Tube Draw Benches
- ★ Bar and Tube Reeling and Straightening Machines
- ★ Centreless Bar Turning Machines
- ★ Rotary Swaging Machines
- ★ Horizontal and Vertical Bull Blocks for Rod or Tube
- ★ Wire Drawing Machines
- ★ Rolling Mills and Auxiliary Equipment

We shall be pleased to forward leaflets describing any of the above machinery on request.

Our Technical Staff will be pleased to co-operate in the development of special modifications to standard machines including the preparation of layouts and supply of equipment for complete new plants.

SIR JAMES

Sir James Farmer Norton (UK) Ltd.

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