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SUPER CASTER LEAD AND RULE MOULDS,

1 to 3 POINT SERIES 77,000.

THIS MOULD is designed to cast rules and high and low leads in any point size from 1 to 3 as required.

The required point size is obtained by means of interchangeable insets, distance pieces, blades and caps.

DESCRIPTION OF MAIN PARTS OF MOULD

THE STRAIGHTENING DEVICE

This consists of a roller 8924 designed to direct the product as it leaves the mould. If the product has a tendency to rise, the knurled-head screw in end of side block should be turned anti-clockwise until straight product is produced.

THE MATRIX SETTING PLATE 10057

This is for setting the matrix in correct relation to the form on front of the mould blade. The markings on the plate are 4, 5 and 6 12-point ems, and these should be set to their zero lines in accordance with length of cast necessary to produce length of product required, i. e., if the em scale on micrometer head is set at 5 12-point ems, the setting plate should also be at that position, taking care that the correct zero line is used.

DOTTED RULE SUPPORTING PAD 8922

The dotted rule supporting pad in mould base should be raised in contact with bottom of the movable side block when making dotted rules; at all other times it should be locked in its lowest position.

SIDE BLOCK INSETS

These are of two designs: the plain ones are for $1\frac{1}{2}$, 2 and 3 point, and can be supplied for matrices of .015" or .030" drive. The plates recessed at the back are for 1 point, and are made to suit a .015" drive matrix only.

IT IS ESSENTIAL THAT THE FACES OF THIS PART AND THOSE TO WHICH IT ABUTS ON THE SIDE BLOCK ARE ABSOLUTELY CLEAN.

THE LEAD CLAMP LEVER 12543

This is provided with an extension which acts as a safety stop. This stop must not be allowed to touch the main stand while the machine is casting. On the other hand, if the gap between the lever and the mainstand is too great, the product will not be fully ejected from the mould.

Adjust the lead clamp screw 14733 so that there is a gap of approximately $\frac{3}{16}$ " when the product is clamped.

ADJUSTMENTS.

TO ADJUST

Release the lead clamp screw lock nut 1085 (which has a left-hand thread). Turn the machine so that the lead clamp lever is $\frac{3}{16}$ " from the main stand. Firmly tighten lead clamp screw against spring block 10013. Tighten lock nut and rotate machine to check setting. Rotate machine by hand through the casting position and stop at the point where the telescopic rod is about to release the clamp screw. Attempt to release clamp screw by lifting the clamp lever upwards. If this can be easily done, it proves that the lever is touching and must be readjusted.

IF ANY DIFFICULTY IS EXPERIENCED IN MAKING THESE ADJUSTMENTS, CHECK THE LENGTH OF THE LEVER ROD 10478 (xd9SD) as follows:

From the top of the swivel collar 9984 (9SD15D) to the top of the yoke 12458(b9SD8) should be $4\frac{1}{16}$ " with spring compressed, and $5\frac{5}{8}$ " free.

Frequently oil the threads and clamping end of screw by placing machine oil in the slot in moveable side block where marked 'OIL'.

The setting of the lead clamp screw is of considerable importance. The aim should be to get the minimum withdrawal of the spring box rod 10265(10SD2D) from the spring box end 7278(10SD1). Then the stop face of the lead clamp lever is approximately $\frac{3}{16}$ " from the main stand.

ADJUSTING THE JET POSITION

Place the mould on machine and proceed as follows:

See that the jet block driving rod connecting rod yoke position pin 10304(a7SD7) is positioned for $1-1\frac{1}{2}$ " point. Turn machine to approximately 260° until the jet block 11438 rests against the jet block stop 10302. Adjust the jet block driving rod connecting rod 7332 (7SD), by loosening the lock nuts right hand and left hand, and turn the rod to right or left until there is just tension on the

type carrier cam lever plunger 11380(a26SC12). Lock the nuts, taking care that the flat on the jet block driving rod 12220(b6SD) remains in horizontal position. Check setting.

When the above adjustment is correct, the jet block driving rod connecting rod yoke position pin 10304(a7SD7) will be correct for all sizes cast on strip moulds, if placed in the 12-point hole in the type carrier cam lever extension 11379(b26SC3).

ASSEMBLING AND OPERATING THE MOULD.

1. Select from the mould box the blade, distance pieces, cap or matrix, and piece of product to be used.
2. Smear blade with castor oil and place in position on blade connection.
3. Place the distance pieces 7443, 10039 in position.
4. Place the moveable side block 10014 against the distance pieces and see that the lead clamp screw 14733 is not contacting the spring block 10013.
5. Insert and finger-tighten the five vertical screws 279(2), 377, 382(2), and three horizontal bolts 384. INSERT THE VERTICAL SCREWS FIRST.
6. Lightly tighten the vertical screws with spanner.
7. Lightly tighten the horizontal bolts with spanner.
8. Repeat instructions in last two paragraphs in the same order, firmly tightening all eight screws and bolts.
9. See that the blade is quite free throughout its motion when the lead clamp is released.
10. Hold the straightening roller 8924 by means of roller carrier cam 10026 in top of side block 10014 and push the product in mould opening, so that the end will be covered by the matrix or cap.
11. Place matrix locator 10054 in position on fixed side block after making sure that all faces are perfectly clean.
12. Adjust the matrix setting plate 10057 to suit length of product to be cast.

13. If casting leads, place the cap on top of mould so that the projection enters mould opening, and clamp it in position.
14. If casting rules, fill the open end of matrix with soap which is sufficiently soft not to crumble.
15. Place the matrix in position against locator 10054 and setting plate 10057, taking care to put the end filled with soap toward setting plate.
16. Place the matrix clamp pad 10055 on top of spring block cover plate 10395 and lightly tighten the clamp screw 10056 in side block.
17. Place matrix clamp 10052 in position and firmly tighten the clamp screw 13470.
18. Release clamp pad screw and re-tighten, to make sure that the matrix is correctly seated on mould.
19. Connect the lead clamp intermediate lever rod 9981(b9SD) to the mould.
20. See that the lead clamp screw is adjusted as previously described, see Sheet 2.
21. See that the micrometer head and counter head are adjusted to suit length of required product.
22. Connect mould blade slide drive lever connecting tube 7395(6SF) to intermediate lever 8742(a5SF1) by means of ball end 10260(6SF1F), which must be placed in hole marked 'Leads': lock ball end with nut 1037(6SF2).
23. Attach water supply piping 7650(21SLI).
24. Fill oiler with castor oil and connect oil pipes and place oiler valve lifters in vertical position.
25. See that correct nozzle (No. 10) 9980(12SH11) is in position in $\frac{7}{8}$ " pump.
26. See that metal is at correct temperature, see table on Sheet 8.
27. Turn on water supply.
28. See that gear box is set for correct speed, see table on Sheet 8.

29. Insert pump handle and turn machine to casting position, taking care that pump body operating rod lever 16178(a26SH) is under crosshead stud 4694(16SH5).

30. Adjust piston Spring rod nut 14151(a17SH5) to suit point size to be cast.

31. Before starting to cast, rotate machine by hand with pump locked out, then engage pump and rotate machine again by hand to make first cast. This is to see that the mould and machine are working correctly before starting under power.

If the type carrier cam lever plunger 11380(a26SC12) throws out of engagement, the mould should be warmed up by swinging the pump into position for a short time before commencing to cast.

SUGGESTIONS FOR CASTING SATISFACTORY PRODUCT.

1. Frequently clean both nozzle and pump.
2. Keep surface of metal clean to allow jets to melt as soon as they fall into metal pot.
3. Adjust the crosshead stud 4694(16SH5) as low as possible for 1 to 1½ point, but raise for 2 to 3 point.
4. When changing from one point size to another, remember to adjust the temperature regulator, so that metal is at required heat when ready to re-start.
5. When changing style of product, take a piece of product just cast and keep with the matrix. This can be used with the first cast when using the same matrix again, thus avoiding use of soap.
6. As soon as the product being cast is fusing correctly, test whether the product is straight, cast two long lengths of the product for which the machine is adjusted, lay them on the galley bracket foot to foot. If the feet do not touch throughout their length, the roller carrier actuating screw must be adjusted.
7. Marks on the side of the product usually indicate that the facing plate in the side block (fixed) against which the product is pressed by the roller is 'timing'. Each time the mould is changed from one point size to another, it is advisable to rub both this plate and the insets with a piece of product to remove any foreign matter.

8. If the product is short, the lead clamp screw 14733 may not be correctly adjusted, or the matrix not properly located.

9. If the product is long ('blowing out') the lead clamp screw may again not be correctly adjusted, or the screw may require oiling.

10. Always place a piece of product in the mould before applying pressure to the lead clamp lever 12543. Failure to do this may cause the spring block to be unduly strained.

11. Occasionally make sure that the oil has a clear passage through the small oil holes in side blocks and jet block.

REMOVING MOULD FROM MACHINE.

1. Disconnect the mould blade slide drive lever intermediate lever 8742(a5SF1) by removing the ball end 10260(6SF1F) and move the lever so that mould blade is clear of blade slide housing.

2. Place oiler valve lifters in horizontal position.

3. Disconnect lead clamp lever.

4. Remove product from mould.

5. Disconnect water connection.

6. Remove four screws 439(18SL1) from mould base and the two mould clamps 7148(14SL1) from front and right-hand side of mould. MOVE FRONT ECCENTRIC FIRST.

7. Pull mould towards metal pot until the blade is clear of the blade connection, and jet block is against jet block stop, then raise the 'ejection' end of mould until jet block is clear of its driving rod 12220(b6SD).

8. Blow the water out of the mould waterways and thoroughly clean mould before placing it in the mould box. If any defect should develop in the mould which cannot be corrected by following these instructions, the complete mould should be returned to The Monotype Corporation Ltd. for repair or adjustment. In returning a mould, send also a few pieces of the defective product or jets, with a note giving particulars of trouble.

If the defect is in the face of the rule, return the matrix which is giving trouble: otherwise do not return rule matrices with mould.

CLEANING INSTRUCTIONS FOR JET BLOCK 11438.

Frequently remove the jet block for cleaning: it will usually be necessary to remove the jet pusher only, smear with castor oil and replace. If, however, the faces of the jet block require cleaning, proceed as follows:

Remove large plate 11439 only (the small plate 11441 must not be removed). Clean angle faces on both plates and pusher 10035 with a piece of rule (do not use abrasive material for cleaning). Thoroughly clean all other faces of the jet block including key and keyway.

To assemble, replace large plate and secure lightly with the six screws 55L. Oil and replace pusher. Release locking screw 564 of eccentric pin 11440 and adjust position of the large plate by means of eccentric pin, until pusher is a good sliding fit, then lock the eccentric. Firmly tighten the screws 55l securing large plate. Smear all faces of jet block with castor oil before replacing in mould.

PREPARING MOULD FOR CASTING FULL-FACED RULES.

1. Remove the insets from the mould and replace with the correct insets according to the size to be cast.
2. Assemble blade and distance pieces of the correct point size.
3. Assemble other parts of mould as for casting rules, but use blade cap in place of rule matrix.

PRODUCT INFORMATION TABLE

POINT OR DIDOT LEADS AND RULES

	<u>1</u>	<u>1½</u>	<u>2</u>	<u>3</u>
Speed per minute	125	125	102	83
Temperature (Fahr.)	720°	700°	675°	625°
Temperature (Cent.)	385°	371°	357°	329°
Water Regulation	half on	half on	full on	full on
Pump	7/8"	7/8"	7/8"	7/8"
Nozzle	10	10	10	10
Pump Spring Compression	5½"	5"	3"	3"

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DRGS REQUIRED WITH THIS DESCRIPTIVE MATTER DD986 and DD912