

Giroflex

HAND KNITTING MACHINE



Konstanzer Apparatebau Kurt Girardelli jr., Konstanz a.B.

With the Compliments

of

Gizotex Quick Knitters

32 CHILTERN STREET,
BAKER STREET,
LONDON, W.1

TEL. WELBECK 2423.

To our dear customer!

Now that you have purchased your GIROTEX you are longing to start knitting. We are equally anxious that you should do this well. But before you start, please remember that the machine is only as good as its master, and that, as with a piano, you cannot expect to play the right tune if you hit the wrong notes - nor can you blame the typewriter for having spelled the wrong words!

So, please have patience and try not to expect too much of yourself, at the beginning. If you practice, follow the instructions implicitly, and bear in mind that you did not learn to cook, bake, sew, read, write or even walk or talk, in one day, then you cannot possibly go wrong.

The instructions are set out so simply that even a child can follow them. In addition there are a number of patterns given at the end of the book. This will enable you to make a good start with your knitting very soon. Once you have actually knitted a garment you will want to try out ordinary hand-knitting patterns. This CAN be done of course! Because on the amazing GIROTEX you can actually reproduce genuine hand-knitting tensions!

'Good luck' to you then with your knitting and may your machine give you many pleasurable hours of enjoyment and be the fascinating means of providing you with a very profitable source of income, as it has already done for thousands of others.

Yours sincerely,

Girotex Quick-Knitters

Contents of this book

GIROTEX - DOUBLE-BED-MACHINE

	Page
1. The Cam-Box	5
2. The Needle-Bed	6
3. The 3 different Needle-Positions	7
4. The Shuttle	7
5. The Wool-Guide	8
6. The Lever	9
7. The Needles	9
8. Accessories	9
9. How do I maintain my GIROTEX?	10
10. Correct Tensioning	10
11. How do I set up my machine?	10
12. The right distance between 2 needle beds	11
13. Cast-on K.1, P.1, every other needle	10
14. How to thread the wool	10
15. Setting up the wool-guide	10
16. The process of knitting	11
17. Circular Hem	11
18. Different needle settings	12
19. Cast-on K.1, P.1, every needle	13
20. Cast-on K.2, P.2	13
21. The racking motion	13
22. Fisherman's Rib or Raised Rib	13
23. Increasing of one stitch	14
24. Increasing of several stitches	14
25. Decreasing of one stitch	14
26. Decreasing of several stitches or casting-off	14
27. Reweighting the work (Ribbing)	14
28. To pull back rows	14
29. Circular-Knitting	14
30. Neck-Shaping	15
31. Buttonhole	15
32. The Holding-Position	15
33. Sources of mistakes and their correction	16
34. Sock-Pattern	18
35. Knitting and Weaving	18

GIROTEX - SINGLE - BED - MACHINE

1. Stocking-Stitch	20
2. Tension-Setting	20
3. Converting GIROTEX to single-bed machine	20
4. Casting-on for Stocking-Stitch	20
5. Increasing	21
6. Fully-fashioned Increase and Decrease	21
7. Decreasing	22
8. Buttonhole	22
9. Knitting of Pockets	22
10. Double Hem	22
11. To knit on	22
12. Fair-Isle	22
13. Reweighting the work (Stocking-Stitch)	23
14. Knitting-Patterns for single and double-bed machines	27
15. Illustration of the GIROTEX and identification of parts	37

Girotex-Double-bed Machine

Both cam-boxes slide along in the grooves of the rails and enable slides to move across so far as to knit a stitch on the extreme end needles. The function of the cam-box is to bring the needles to the required knitting position by moving the slide to and fro. Both cam-boxes are identical and with the help of the 2 slide brackets, any difference in the distance of the needles is automatically equalized. In the centre of the brackets, the 2 handle-knobs are fixed. The backslide carries the wool-guide, which is fixed into its socket when the machine is set up. Each cam-box contains 2 tension-cams and 2 centre-cams. The centre-cams push the needles up to start the actual knitting. The tension-cams (or knitting-cams) are fitted to the tension regulators and these determine the size of the stitch.

1. The CAM-BOX

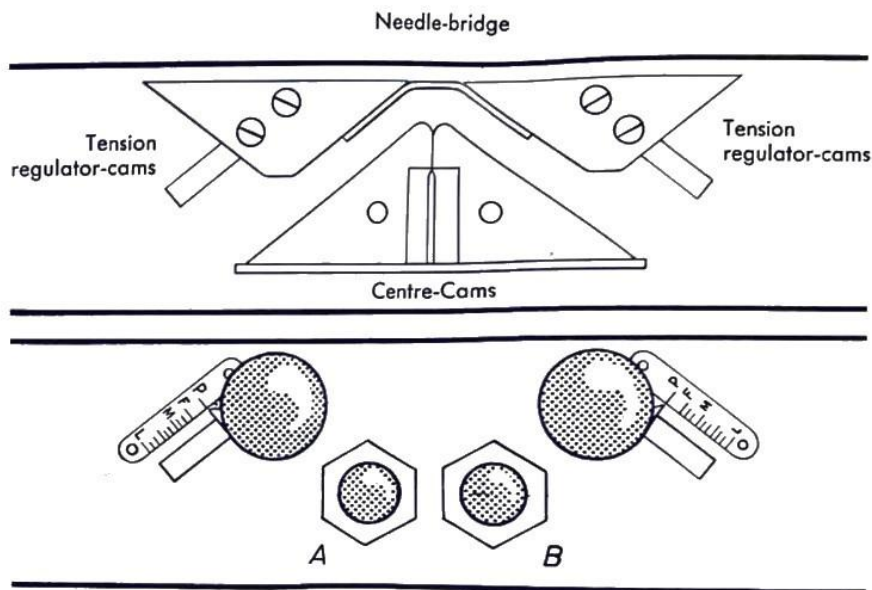


Illustration 1
A and B Knobs for Circular-Knitting

Procedure for Knitting.

On a double-bed machine (see illustration) there are four knitting cams, i.e. 2 on either side of the cam-box, which are always described as the "leading" cam and the "following" cam. When the slide is moved from left to right, the righthand cam is called the "leading" cam, and the left-hand cam the "following". When the slide is moved from right to left, the opposite applies. Here we must note that it is always the "following" cam, together with the centre-cam, that does the knitting. The centre-cam pushes the needles up, while brushes on the shuttle open the needle latches and keep them open until the wool is laid in. Then the needles holding the laid-in wool are pulled down by the "following" cam, and a new stitch is formed on the needle. All cams can be put out of action, i.e. the four tension cams are pushed up to "P". As a result, the needles are not pulled down by the cams and the stitches remain on the needles. Pushing the "leading"-cams up to "P", eases the strain on the knitting

and is useful when changing from a tight to a medium tension, and from a medium to a loose tension. Also when reweighting the work or changing from one pattern to another, or when several stitches have been transferred onto one needle, for all this puts an extra strain onto the wool and there is a danger of it breaking. Pull up all four centre-cams. Now the slide can be moved either way without action. When the centre-cams are pulled up and out of gear, the needles on that particular bed are not moved and therefore, no stitches are formed. The size of the stitch depends on the setting of the tension cams: "L" is the largest stitch and "F" the smallest one.

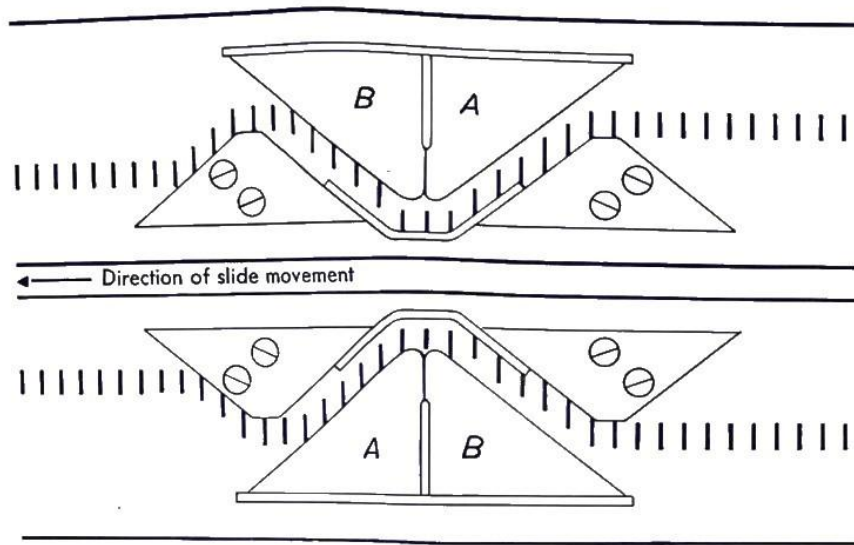


Illustration 2

Formation of a stitch

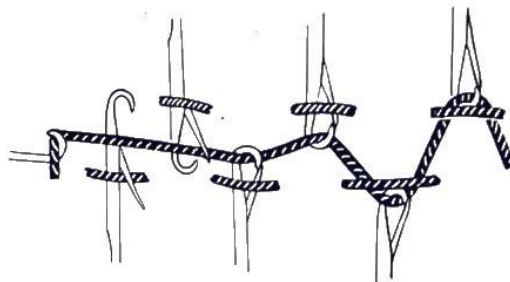


Illustration 3

2. The Needle-Bed

The needle bed is all metal and of one piece. It is of high-grade alloy with a hardened surface. The needle bed slides into a groove in the frame where it can be shifted within a range of 5 needles. Below the upper rail there is a foam-rubber strip, to keep the needles in the required position.

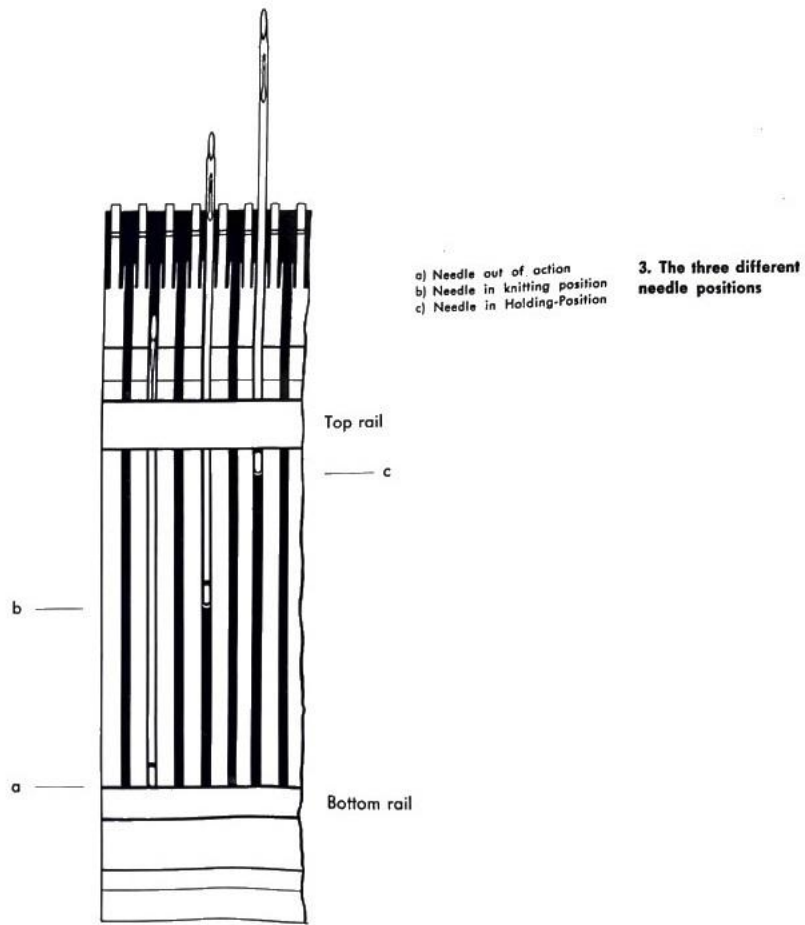
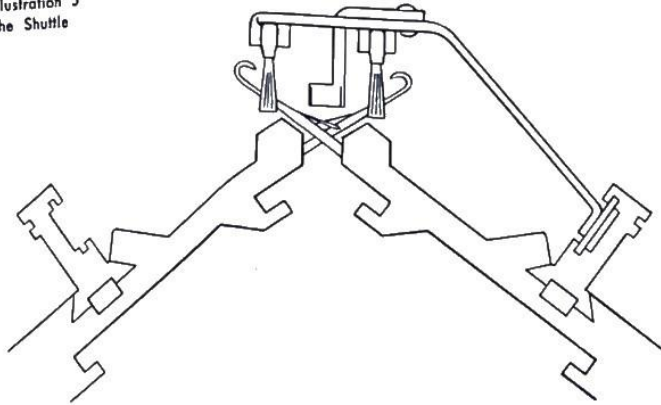


Illustration 4

The shuttle aggregate consists of a brush-assembly with 2 brushes and a metal slot. The whole shuttle moves in the top rail of the back bed and is hooked into a carrier base. When adjusting the shuttle, it is important to see that the metal slot runs approximately $\frac{1}{8}$ " above the needle crossings, and that the front brush does not interfere or catch in the slot. Should the brushes interfere or become ragged with use, they may be trimmed with scissors. If required, the whole shuttle aggregate can be exchanged within a few minutes.

4. The Shuttle

Illustration 5
The Shuttle



5. The Wool-Guide The complete wool-feed assembly is fixed into the cone upright collar at the back half of the cam-box. This is carried along with every movement of the slide.

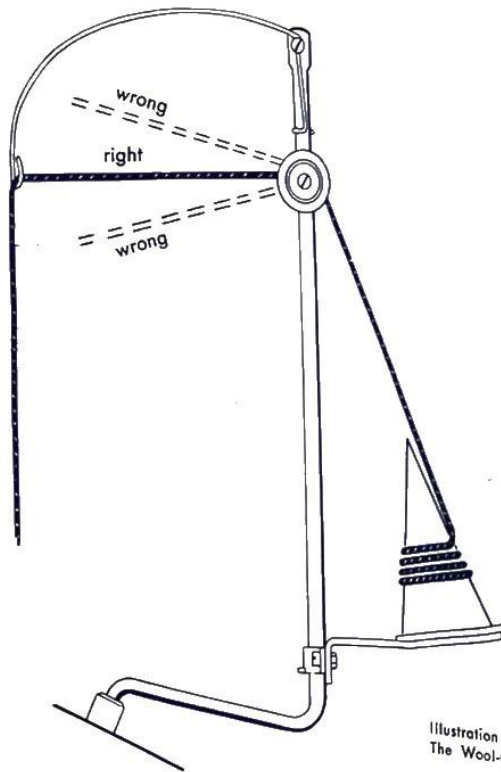


Illustration 6
The Wool-Guide

The Wool-guide consists of a tension disc with a spring-regulator, tension wire and cone stand. The cone stand is fixed to the wool-guide with a bracket and 2 screws. By carrying the wool-feed with the slide, this enables a constant and even flow of wool into the needles and thereby a regular formation of stitches.

The lever is fixed into the left hand corner of the frame on the front bed. This enables the front bed to be moved, in contrast to the back bed, which is rigid. The front bed can be racked over 5 needles, which enables us to knit various zig-zag and racked patterns. Position "0" in the centre of the lever scale is only used when knitting, K.1, P.1, every other needle.

6. The Lever

The GIROTEX needles are made of the finest rust-less steel and consist of 3 parts. a) Needle-head. b) Needle-latch. c) Needle-shaft and foot.

7. The Needles

It is important that the latches of the needles always move freely, because uneven stitches will result if they are stiff through strain or wool fluff.

Latch needle
Illustration 7



Bodkins: One-eyed for transferring stitches, crochet-hook for picking up stitches and pattern making, and pointed for re-hooking or catching dropped stitches.

8. Accessories

(see illustration 16)

Bodkin combs: Are used for increasing and decreasing in the middle of row, dividing and transferring a larger number of stitches, or turning round for socks.

Side weights: Are used for casting-on extra stitches, or for casting-on a smaller number of stitches, as for front bands on cardigans, etc. or adding extra weight whenever necessary.

Clamps: Are used to fasten the machine on to the table. They fit into the 2 outside slots in the base on the back bed.

The Cone: The wool is wound on the cone either by hand or by a woolwinder (This is available from The Main Distributors or Agents) Wool which is already wound on a cone can be purchased from Stores. Care should be taken that the wool is wound evenly and not too close to the tip and base of the cone.

Stocking-Stitch-Bar: This is fastened to the rear slide after the front bed of the machine has been removed. This holds the fabric in place while knitting.

Spare Needles: In case of strained latches or breaking of needles, these are a stand by. See instruction on page 17 on how to change needles.

The Row-Counter: This is fitted into the rear of the bottom rail back bed, can be secured in any position along. This rail, and records the number of rows knitted. On the right hand side is a thumb screw which turns the row-counter back to 0 when commencing a new piece of work.

The Needle-Counter: This is fixed all along the back bed. It is used for a quick and well balanced selection of the required number of needles.

Long and Short double-bed combs: With wire this is used for casting-on, on the double-bed machine.

Open-Hooked Single Bed Comb: Is used for casting-on, on the single-bed machine, when the front bed is taken off. Also for Reweighting the work when knitting stocking stitch.

Long and Short Weights: With the Hooks provided attach weights to combs as instructed.

9. Care and maintenance of the GIROTEX

It is advisable for any machine which is in constant use to be maintained as follows. With a soft brush clear needle beds as well as needles of wool fluff, dust and oil. This should be done regularly, as otherwise the latches will become clogged and prevent the free movement of needles in their grooves. Remove cam-boxes and clean out fluff from under the cams. The slide and shuttle rails should be oiled very lightly once a month. Once a year, all needles should be removed and cleaned, the whole needle bed should be brushed and cleaned as well. When oil is used, care should be taken to use acid free machine oil (three-in-one). When this has been done, remember there could be a danger of oil soiling the work, so remove surplus oil from rails with a clean cloth. It should be noted that if the machine is moved from a cold room to a warm one, condensation will form, and should carefully be wiped off. Keep your machine in a dry room at an even temperature. After use, cover with clean cloth or plastic cover or replace it into the carton it was delivered in.

10. Correct Tensioning

- P – Patent of Fisherman's Rib.
- F – Fine, for very thin wool.
- M – Medium, 3-4 ply wool.
- L – Loose, four-ply and double knitting wool (knitted only on every other, or third needle).

Knitting on the Double Bed

11. How do I set up my machine?

The Girotex can be fastened to any strong and firm table or to a stand which is specially designed for this machine. The machine is fastened with 2 clamps, which fit into the 2 outside slots in the base of the back bed. If a table is used, the front bed overhangs. On a stand, the front bed rests on the frame of the stand. Secure clamps and see that the machine is absolutely rigid. The edges of the clamp should be flush with the edge of the table and with the edges of the back bed.

The wool-guide and cone stand are assembled (see page 8) and fixed into the round boss at the back of the cam-box.

The lever, which can be moved from 0 three positions to the left and three positions to the right, should be set to the desired position (see note on this). The back bed needles make the purl stitch and the front bed needles the knit stitch. It should be noted that the wrong side of the knitting faces the knitter.

12. The right distance between 2 needle beds

At each end of the machine frame, there are 2 serrated screws holding the side bars, which connect the 2 beds together. By loosening these screws, the front bed can be moved nearer or farther apart from the back bed. (Fasten screws after distance has been established). The right distance for the average knittingwool is 5 mm. With very fine wool, silk or other yarn, to obtain a closer stitch, it is advisable to narrow the gap to 3 mm. However, if rug-wool or other thick yarn is used, the distance can be increased by bringing the front bed slightly forward. It is important, that both sides of needle beds should be separated by equal distances. On the needle selector these given distances are to be found. Place the appropriate thickness between the two beds and secure side screws as instructed.

13. Cast-on K.1, P.1, every other needle

When using every other needle, first place racking-lever on 0. Starting from the centre of the needle-counter, push up the required number of needles on both sides of the beds (needle-heads flush with the top of the needle beds). Start with a knit needle and finish with a purl. Bring slide across these needles once or twice to open latches. Leave slide on the left hand side.

From the cone, the wool passes between tension discs into the slot between them, then is hooked into the loop of the tension wire, and finally through the metal slot of the shuttle down between the needle beds, and attached to the handle of the lever.

14. How to tread the wool

The tension discs should now be either tightened or loosened with the adjustable screw, so that it holds the wool tight enough for the tension wire to be held in a horizontal position. It is very important to have the right flow of wool into the needles. If tension discs are too tight, the machine becomes stiff, stitches are pulled together and the wool breaks.

15. Setting up the Wool-Guide

(see par. 5 and illustration 6)

Now move the slide slowly over the needles until all the stitches are cast-on. At this stage, the tension of the wool may pull the last few needles slightly towards each other. To avoid this, the last needles should be held down with a finger. Now take a comb, remove the wire and place it, with the weights attached to it, centrally underneath the needle beds and push it up between the beds until the comb teeth are above the cast-on stitches. Insert the wire through the holes in the comb until it is opposite the last cast-on stitch. Lower the comb until it is suspended from the stitches by the wire. It is important to place comb always centrally onto your cast-on stitches, for a wrong position will cause uneven weighting. There would be more tension on one side of the work than on the other, and this may cause dropped stitches.

16. Process of Knitting

In order to get a real nice, firm edge to the work, it is advisable to knit a circular hem. First note position of the slide and needles. If the needle nearest to the slide is a purl, lift up nearest half centre-cam to the work on the back slide. And lift up the one farthest from the work on the front bed. Knit 2 rows. This completes one circular row. (It should be noted that it is always the opposite bed which knits when the centre-cam is out of gear). Repeat if required. 1 or 2 complete rows are usually sufficient. Replace cams. After knitting the circular hem one continues knitting in rib. To do this, first of all ensure that both centre-cams are in gear, that tension regulators are set to the tension required, but make sure that for the first row after the circular hem the 2 tension cams nearest to the work are brought up to "P." Knit 1 row and replace both cams to normal tension. Carry on knitting, by moving the slide over the needles and back, taking care to see that the last stitch has been knitted in each direction. Please note that it is most important for the slide to be moved far enough to knit the last stitch, but not further. For instructions on how to continue on Stocking-Stitch from K.1, P1, welt. (see page 20 par. 3 and foll. of page 21)

17. Circular Hem

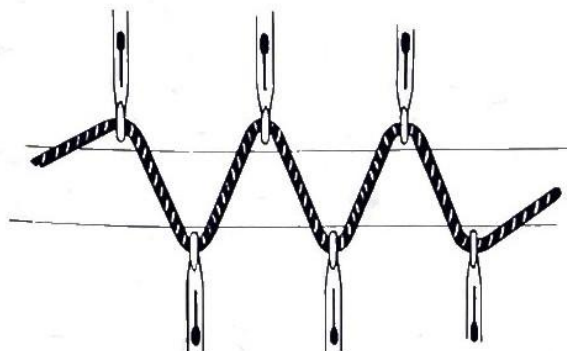


Illustration 8
Casting-on

TENSION SCALE

The following chart is an approximate guide only and varies slightly according to different thicknesses of wool.

Tension-scale of the needle arrangement most frequently used.

Thickness of wool	K1, P1 every needle	K1, P1 every 2nd needle	K2, P2	K3, P3	K3, P5
Fine wool (machine wool) 2-ply, usually 1 weight	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$
Average 3-ply usually 2 weights	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$
Thick 4-ply, usually 2 or 3 weights	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$
Double-Knitting every 3 rd needle usually 3 weights		$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$			

P = Patent, M = Medium, $\overline{\overline{M}}$ = 1 tension above Medium, $\underline{\underline{M}}$ = 2 tensions below Medium

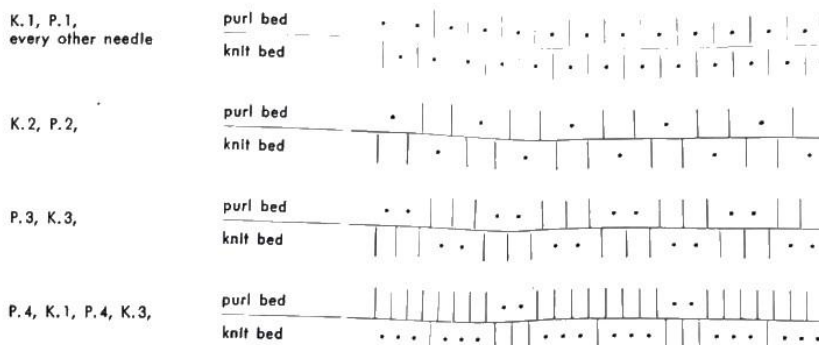
Tension-Scale for knitting-patterns most frequently used

Thickness of wool	Full patent every 2 needle	Half patent every 2 needle	Full patent every needle	Half patent every needle	Circular	Stocking-stitch
Fine wool (machine wool) 2-ply, usually 1 weight	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$
Average 3-ply usually 2 weights	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$
Thick 4-ply, usually 2 or 3 weights	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$		$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$	$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$
Double-Knitting every 3 rd needle usually 3 weights						$\overline{\overline{M}} \mid \overline{\overline{M}}$ $\overline{\overline{M}} \mid \overline{\overline{M}}$

P = Patent, M = Medium, $\overline{\overline{M}}$ = 1 tension above Medium, $\underline{\underline{M}}$ = 2 tensions under Medium

It should be noted that strokes indicate the needles in use, dots those which are not in the working-position.
 For all pattern-settings except K.1, P.1, every other needle, the racking-lever can be in any one of the positions 1, 2, 3.
 For K.1, P.1, every other needle, however, only position "0" is to be used. For rib

Needle-Settings for different ribbed patterns



Place racking-lever in any one of basic positions 1, 2, or 3. Push up required number of needles on each bed, starting from the centre mark of the needle counter, then cast-on in the same way as in paragraph 12. (every other needle).

19. Cast-on K.1, P.1 using every needle

Set racking lever in position 3 left. Bring up needles K.2, P.2. Now move racking lever to position 2 left and cast on. Insert comb and move racking lever back to position 3. Continue to knit. Circular hem as normal.

20. Cast-on K.2, P.2

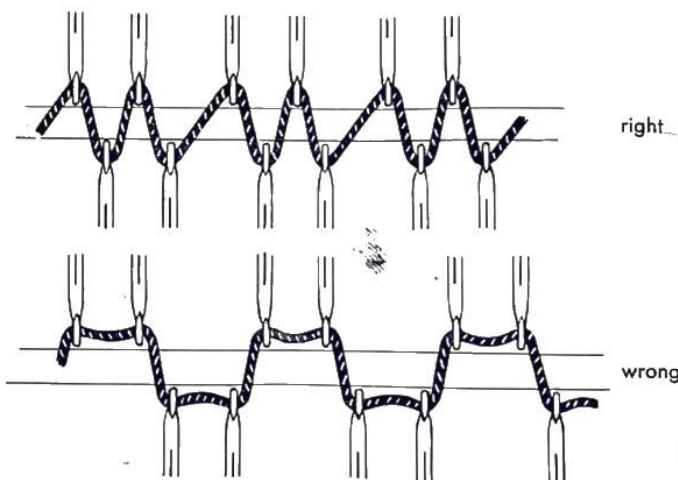


Illustration 13

By altering the position of the needle beds with the racking-lever, very attractive patterns can be knitted on the GIROTEX. There are 6 positions, 3 each side from the centre "0" mark. It is to be noted that racking should be done step by step, moving the lever only one number further after each row knitting as show:

3 2 1 1 2 3 and back 3 2 1 1 2 3 ;

repeat as often as required.

Position "0" is used only for setting needles for K.1, P.1, every alternate needle. It is advisable to use one grade looser tension for zig-zagging patterns that for an ordinary rib.

21. The Racking-Action

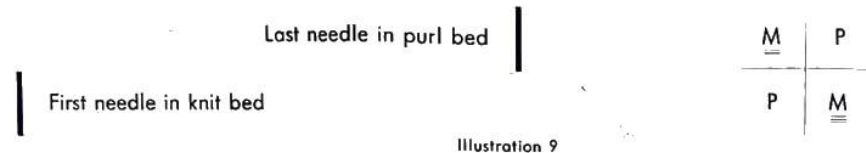
Particularly effective patterns are: K.1, P.1, every needle zig-zagged after every row. (Suitable for thin wools).

K.2, P.1, zig-zagged after every row or every second row.

K.2, P.2, zig-zagged after every row or every second, and racked over one or several needles.

22. Fisherman's Rib or raised rib

Cast on as for ordinary rib. It is important to set needles according to diagram below. If the first needle is on the front bed (a knit stitch) the last must be on the back bed (a purl stitch). Set cams as follows: The slide is on the left hand side. Set left front tension to "P" and left back tension between "M-L" Knit one row. Now set right front tension to "M-L" and back right to "P" Go on knitting.



For fisherman's rib it is necessary to use more weights than for ordinary rib. The tension through the wool guide should also be slightly looser. For increasing and decreasing on the fisherman's rib, it is important to keep the end stitches in the original setting. It is advisable, therefore, to increase or decrease, as the case may be, two stitches at one time, and so keep the needle position correct. For several increases use side weights. For this raised rib, only fine and 3-ply soft wool should be used. For a 4-ply and double knitting, every third needle should be used.

23. Increasing of one stitch

The increasing is done at the wool end, i. e. the same side as the slide, by pushing up one empty needle with open latch opposite the last knitted stitch.

24. Increasing of several stitches

Push up the required number of needles with open latch on the side opposite to where the slide is. Knit across and the needles will have cast on. Now insert the side weights (pear shape wire hook) or if number of new cast-on stitches is more than ten, use the short casting-on comb (the one with the wire) and weight the newly cast-on stitches. If you are knitting a pattern, transfer stitches according to the pattern after another row has been knitted.

25. Decreasing of one stitch

Decreasing can be done on both sides of beds if required. Open the latch of the first three needles (counting alternately from knit bed to purl bed). Using the bodkin, taking second stitch off the needle, and place it on to the third. Now take the first stitch and place it on to the new empty second needle. Now push the first empty needle to the non-working position.

26. Decreasing of several stitches or casting off

By using the bodkin, transfer the first stitch to the second (on the opposite bed). Now push up the needle which has two stitches on it until the stitches lie behind the latch. Lay the wool by hand in to the needle (between hook and latch), and pull this needle down until the stitch has been knitted. Now transfer this stitch on to the next needle and repeat. Push empty needles to the non-working position.

27. Reweighting the work (Ribbing)

Remove casting-on comb from the work, holding knitted fabric down by hand. Push up comb centrally between needle beds and re-thread ware. Re-hang weights. For the first row only push up leading tension buttons to "P".

Remove weights. Holding the wool-end between fingers and as near as possible to the work with a sharp tug, pull wool backwards over each needle so that it will unhook. Proceed to the end of the row, or as far as required. If slide and end of wool are at opposite sides, lift up all four centre cams, push up all four tension buttons to "P", and bring over slide to the wool end without knitting. Replace tensions and push down centre cams. Rethread wool and proceed knitting.

28. To pull back

Circular knitting can be done only in stocking stitch. Therefore, only stocking stitch patterns can be knitted e. i. lacy stitch, stripes of different colours etc. Circular knitting is suitable for socks, scraves, children's underwear, leggings, etc.

29. Circular Knitting

To cast on: K.1, P.1, every needle. This will give a locked edge at the bottom of the garment, which is later opened and finished by casting off or sewing a hem. After casting on the slide is on the right hand side. On the front bed lift up the left centre cam. On the back bed, lift up the right hand centre cam



At the same time, set tension buttons as follows: On the front bed left tension to two below "M" (for 3-ply wool) and right tension to "P". On the back bed, left tension to "P" and right tension two below "M" See diagram

Racking lever should now be placed in position "0". It is necessary to use more weights for circular knitting than rib. It may be advisable to pull down work by hand from time to time when using thicker wool. Use side weights as well as the bar weights.

A) Counting from the side opposite to the slide approximately 30-35 stitches, push these needles into holding position (see paragraph 31) Knit one half and decrease for shaping the neck (round or V) as required. As there is no weighting in the middle, hook one side weight into the fabric to ensure sufficient pulling down.

30. Neck Shaping

B) Transfer 32 knit stitches from the centre, on the opposite purl needles with two bodkin combs, so that there are two stitches on each of the 32 purl needles. Now transfer these stitches on to the two bodkin combs and attach the clips. Push the empty needles down to the bottom of the bed. Knit the section on the slide side and shape as required. When one side is knitted and cast off, replace stitches from the bodkin combs and knit second half the same way.

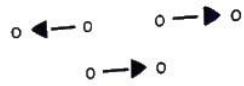
SMALL: Open the latches of two needles on the front bed and two needles on the purl bed facing each other. Transfer the left hand stitch from the front bed on to the next needle on the left of the purl bed. Now the right hand stitch from the purl bed on the next needle to the right on the front bed. Leave the two empty needles in the working position with latches open. See diagram.

31. Buttonholes



LARGER: Open the latches of four needles on the purl bed and two needles (facing this four) on the front bed. Working on the back bed only, transfer the second stitch on to the first stitch and the third stitch on to the fourth. On the front bed transfer

the first stitch on to the second. Leave all empty needles in working position, latches open. See diagram.



LARGE BUTTONHOLES: According to the size of the buttonhole required, push up the number of needles so that the stitches are behind the latches. Take a piece of wool in a different colour and lay it in the open latches. Pull the needles down by hand to knit-in the new wool. Continue knitting. When the garment is finished, thread a sewing needle with the wool (same colour as garment) and thread it through each of the buttonhole stitches. Remove the differently coloured wool and finish the buttonhole off.

32. The Holding Position

The Giratex double-bed has a holding position as all the single bed machines, i. e. a third needle position. It is mostly used for turning the heel on a sock, fancy patterns, Fair Isle, or dividing and neck shaping. Needles not required are pushed up against the top rail, so that all stitches are beyond the latch. For example, push every fourth needle into holding position. Now knit slowly across needles in working position for 1-3 rows. Bring back needles from holding position replace stitches with a bodkin and for the first row bring up leading tension button to "P". Make sure that all latches are open on those needles which have been brought back from holding position, to prevent dropping of stitches.

33. Sources of mistakes and their correction

FAULT	CAUSE	REMEDY
Dropping of end stitches.	<ul style="list-style-type: none"> a) The slide is pushed too far past the end stitches and the wool coming through the tension regulator is too slack and will loop underneath the needles when pushing slide across. b) Slide is not taken far enough across all the needles, and therefore wool is not fed into all the end needles. c) Tension regulator on the wool guide is too loose and, wool is coming too freely into and over the needles. d) There is not enough weight on the double-bed or sides are not weighted. For single bed side weighting is not done properly. e) Shuttle lays in wool too soon, i. e. above the latch instead of into it. Stitch drops. f) Bristles on the brush assembly become entangled into the metal slot. This prevents free flow of wool into the needles. g) It has been forgotten to unhook the wool from front lever where it was placed after casting on. This causes uneven weighting. h) Comb and weights caught on the clamp or side connecting bar of the two beds. 	<ul style="list-style-type: none"> a) Push the shuttle approximately 1 1/2 inches beyond the last stitch. If slide is for any reason farther away, bring it nearer and pull surplus wool back through the tension discs. b) as for a) c) Set tension disc so that the wool lies horizontal between tension disc and tension wire. d) Hook on more weight and side weights. e) With screw-driver ease out two screws on the carrier base and set it approximately 1 mm. into opposite direction to the knitting. Fasten screws. f) Trim bristles. g) Release wool. h) Push clamp handle out of the way (inwards) and pull down work from time to time.
Dropped stitches in the middle.	<ul style="list-style-type: none"> a) Shuttle is too high. b) Brushes do not open needles. c) Bent needle latch. 	<ul style="list-style-type: none"> a) Lower the shuttle by pushing it gently downwards approximately 1 mm above the needle crossings. b) Press gently brush holders so that brushes are pointing slightly inward. c) With pliers, bend latch sideways to straighten it. Check whether it opens and closes freely. If this is not the case, exchange needle.
Uneven knitting.	<ul style="list-style-type: none"> a) Bent needle latch. b) A row of small stitches and a row of large stitches is caused by cams set to different tensions. 	<ul style="list-style-type: none"> a) as above for c) b) Set all four tension pointers to same scale.
Uneven size of stitches within a row.	<ul style="list-style-type: none"> a) Uneven weighting. b) Badly wound wool on the cone or wool used from ball. 	<ul style="list-style-type: none"> a) insert comb in the centre of work. b) Well wound and only coned wool used.

FAULT	CAUSE	REMEDY
Wool breaks and holes in the fabric.	<ul style="list-style-type: none"> a) Tension too tight. b) Too much weight. c) Badly knotted wool. 	<ul style="list-style-type: none"> a) Loosen spring on the wool-feed. b) Less weight. c) Make smaller knots.
Slide stops when knitting across fabric.	<ul style="list-style-type: none"> a) One or more needles are not in knitting position nor quite at the bottom of the needle bed. b) Racking lever was moved unknowingly when needles were working. This causes jamming of needles. c) After changing from K.1, P.1, every other needle (lever position "0") to any other rib and you have forgotten to move lever to neutral position as 1, 2 or 3. 	<ul style="list-style-type: none"> a) Push needles right down and make this sure always before bringing slide across. b) Bring all four tension buttons to P, pull up all four centre cams. Now move slide slowly to clear work. After rectifying mistake, replace tensions and push down centre cams. c) as for b)
After changing from rib to stocking stitch, the first row wont knit.	<ul style="list-style-type: none"> a) It was omitted to alter the tension to a lower setting for the stocking stitch, or not pushed up the leading cam to P for the first row. 	<ul style="list-style-type: none"> a) Pull back too tightly knitted first row. Push up leading cam to P (for the first row only) and set following cam to required tension for stocking stitch. (one or two below M for 3-ply wool). After first row set both cams to same tension.
Wool breaks after loosening tension from tight stitch.	<ul style="list-style-type: none"> a) Leading cam was not pushed up to P for the first row after transit. 	<ul style="list-style-type: none"> a) Pull back wrongly knitted row, join wool and set leading cam to P for first row.
Machine stops knitting.	<ul style="list-style-type: none"> a) Needles are not brought up into working position when centre cams are out of action (as after circular knitting). 	<ul style="list-style-type: none"> a) Return slide and release centre cams by pushing knobs gently down.
One needle does not knit.	<ul style="list-style-type: none"> a) Latch of needle is broken off. 	<ul style="list-style-type: none"> a) Mark place where needle is broken by coloured pencil. Change needle as follows: Ease out five grub-screws on the top rail on that bed where needle is broken. Holding the protruding foam rubber band under the rail at both ends, slide out rail completely. Keep rubber under rail as originally- (do not reverse rubber). Now take out damaged needle and replace it by a new one. Now with the long weight push up needles so that when replacing rail latches will not interfere or jam under rail. Holding both ends of rail, keeping foam rubber in same position as before, slide back slowly rail so that first and last needle are covered by it. Tighten grub-screws and see that all needles move freely but not too loosely.

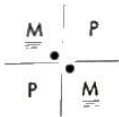
All the above mentioned faults are due to inexperience and will soon disappear. Keep your machine in good condition and it will serve you well.

34. Sock pattern

Cast on 64 stitches K.1, P.1, every other needle. Lever in position "0" and tension on "M" (32 stitches on each bed). Knit two circular rows and join. Knit 60 rows. This is the ribbed welt.

Now pull back 16 stitches and transfer all the purl stitches on to the empty needles on the front bed. Push empty purl needles down to the bottom of needle bed. Alter the position of racking lever from "0" to "1".

Counting from the stitch where the wool has been pulled back to, push up 32 needles on the purl bed (every needle) and open latches. Remove weights from the bottom of the work (but leave the casting on comb). Widen gap between two beds slightly. Open the latches of 16 needles on both sides on the front bed (32 in all). Transfer first one set of 16 stitches with a bodkin comb, as follows: Remove safety clip. Hook on 16 bodkins onto 16 needles. Pull up needles so that the stitch passes the latch. Push down so that all stitches are now on the bodkin comb. Secure clip. Drop the bodkin comb down in between the needle beds, with the clip uppermost. Turn round the bodkin comb so that the outside stitch comes round to the centre of the purl needle. Push the bodkin comb up from below (Never pull from above) between the beds, remove the clip and transfer the stitches on to the 16 empty purl needles. Repeat this on the other end of the work. Replace weights, bring beds closer together (as previously) and knit circular as follows. On the side where the slide and wool are, and where the first needle is, pull up the nearest centre cam. On the opposite bed push up nearest tension button to P and the following between M-L (on 4 ply wool) knit one row and repeat this setting as follows:
Nearest centre cam out of action. Leading tension button up to P, following between M-L. See diagram
Knit 50 circular rows.

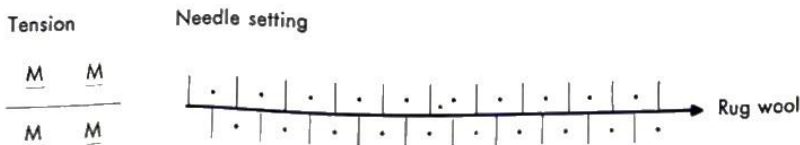


Turning the heel. Push down centre cams from the purl side and set tension as follows. For the first row only leading cam to P and following to M-L. On the front bed both centre cams out of action and push both tension cams to P. The heel is knitted on the back bed only. As a result of this, the weights will not function correctly and therefore the knitting should be **held down firmly by hand** (pulling on the back half of the fabric). Now starting with the side where the slide is, push up one needle to the holding position and knit across. Repeat the operation taking one stitch at the beginning of each row until you have ten stitches held at either end of the purl bed. Hold the work down very firmly. Starting from the centre, to the outside edge, transfer the first stitch and the loop from the holding position back to the needle. In the same way, transfer on stitch at a time at alternate ends, until all needles are back in knitting position. The foot: Release front centre cams and set for circular knitting as before, and knit approximately 60 circular rows or the required length for the foot. The toe: working on both beds and on both sides of needle beds decrease one stitch as follows. Transfer second stitch on to the third and first stitch onto the second. Empty first needle down. Knit two circular rows and repeat this whole procedure six times. Continue decreasing in the same way, only knit one row in between. Repeat this until eight stitches remain. Cast off or graft.

5. Knitting and Weaving

This method of knitting is used for rugs, blankets, string or cane mats and any thick fabric you may wish to procedure.

Cast on K.1, P.1, every other needle; lever position "0", Make sure that first and last needle are on the back bed. Widen distance between two beds to allow thick rug wool to be laid over the knitted row, into the gap between two beds. Holding rug wool firmly down, knit one row. Repeat this after each row knitted. It is advisable to use cotton as knitting yarn for rugs to give hard wear.



Girotex single bed

1. Stocking stitch or plain knitting

After the ribbed welt of K.1, P.1, every other needle (lever position "0") has been knitted, stocking stitch is continued as follows: Push up all needles which have been used on the front bed with a ruler or bodkin comb until the latches open, but not further. Now using the bodkin (see illustration) transfer all stitches from the front bed on to the

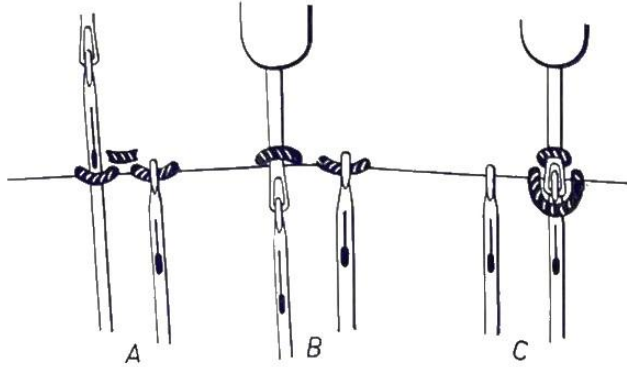


Illustration 10

empty needles on the back bed, as follows: – Holding bodkin in the right hand, hook on needle, so that the bodkin faces parallel to the needle, pull up needle so far that stitch goes beyond latch. Push down to secure stitch on the bodkin, unhook from needle. Now with the left hand push in empty purl needle from behind into the stitch, and pull out bodkin. Repeat this all along the line. Now push down all empty knit needles to the bottom of needle bed into resting position.

2. Tension Setting

Immediately after having transferred from rib to stocking stitch, the tension is reduced to approximately half of that used on a rib, for example, if knitted on "M1" for 3-ply wool in rib, set tension two below "M" for stocking stitch. (See direction for tension settings).

3. Converting GIROTEX to Single bed machine

Unscrew the two handle knobs as well as the two serrated screws from the connecting bars on both sides of the needle beds. Pull forward the front bed and detach completely. Now see paragraph top of page 21, beginning "the stocking stitch".

4. Casting on for Stocking Stitch

Push up the required number of needles, counting from the centre. From the left hand side move the slide across the needles to open latches, and leave slide on the right hand side. Now push up needles approximately 1/4" above the needle bed. Thread wool-fed and shuttle as for the double bed and fasten end of wool loosely on the first needle on the left hand side. Holding the open single bed comb in left hand, loop the wool under the tooth of the comb and then round the needle anti-clockwise (see illustration) all along.

It is important that this should be done loosely. Now set tension (see par 2) and push leading cam to P for the first row only. Move slide very slowly to ensure that the first needle has cast on properly. After the first row add required number of weights. Continue knitting. For 3 or 4 rows so that the teeth of the comb are below the thickness of the needle bed.

The stocking stitch attachment should now be fastened on the back slide brackets by screwing on the two handle knobs. Machine is now ready for stocking stitch. To knit the

first row push up leading cam to "P" for one row only. Please remember to replace cam to required tension after first row has been knitted.

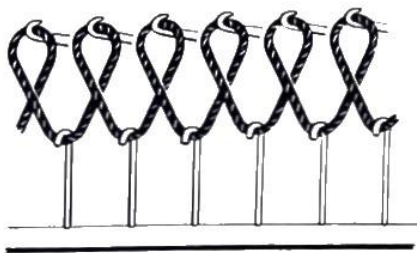


Illustration 11

Casting on. Apart from the above mentioned casting on, there is a quick way. However, this has its drawback in that the cast-on stitches are not locked. Push up required number of stitches, move slide across 1-2 times to open latches. Thread wool. Now insert double bed comb without removing wire between needles holding in left hand and slowly move slide from left to right across. Now you have cast on automatically. Continue as for par. 4.

Increasing must always be done on the side where the slide is standing. Push up the next needle into working position with latch open. Move slide over the work and this stitch will cast on automatically. Care should be taken that on the needle which is pushed up to working position the wool lies underneath the needle when moving slide across it. To increase two stitches, push up the next two needles, transfer the last stitch on to the first empty needle, and the second needle will cast on automatically. Make sure that the latches of newly brought up needles are open. To increase several stitches, push up required number of empty needles, open latch and holding the wire of side weight under the needles, cast on as you have previously done on the single bed comb. Remember to push up leading cam to P for the first row after several increases have been done, and replace it afterwards to required tension.

5. Increasing

To increase or decrease in the middle of the fabric, proceed as follows:

To increase. Push up next empty needle to the left or right as required. Open latch. With the bodkin comb transfer stitches so that the first existing stitch is moved on to a new needle and the rest of the stitches moved all along one needle outward. Now

6. Fully fashioned Increase and Decrease

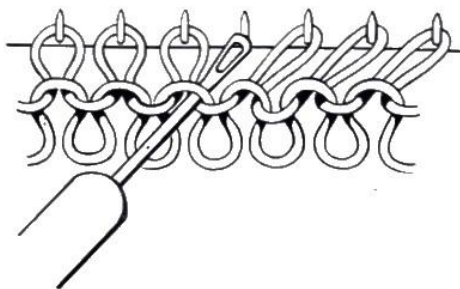


Illustration 12

with the help of bodkin transfer the back of an existing stitch onto the needle which was vacated in the middle of the fabric. Continue as often as required, remember to push up leading cam to P after every change has been made for one row only. **To decrease.** As previously, only move inward. Push down vacated first empty needle to the bottom of needle bed.

- 7. Decreasing** Decrease one stitch by using the bodkin, taking the second stitch onto the third stitch, and take the first stitch onto the second needle which has been previously made empty. Now push first empty needle to the bottom of needle bed. To decrease more than one stitch is like casting off. Using the bodkin transfer the first stitch onto the second needle. Now push up this needle which has two stitches onto the second needle. Now push up this needle which has two stitches on it until both stitches lie behind the latch. Lay the wool by hand in the hook of the needle, and pull this needle down until the stitch has knitted. Now transfer this stitch on to the next needle and repeat the whole procedure. Remember to push down empty needles into the resting position. When laying wool into the needles do not pull it, lay it loosely to avoid having a tight cast-off edge.
- 8. Buttonhole** Move one stitch to the left and one to the right and leave both empty needles up in the working position with the latches open. Knit two rows. Now cross the two loops to make two separate stitches. Larger buttonhole can be made as follows: Push up required number of needles so that the stitches are behind the latch. Take another piece of wool (of different colour) and lay it in the open latches. Now pull the needles down by hand to knit the new wool. Continue knitting. When garment is finished thread a sewing needle with the same colour of wool as the garment, and thread it through each of the buttonhole stitches, remove the different coloured wool and finish the buttonhole off.
- 9. Knitting of Pockets** Work pocket lining according to pattern, holding these stitches on Bodkin Comb. When row for inserting pocket is reached, cast off required number of stitches using spare piece of wool, replacing these with those held on Bodkin Comb. Reweight whole row (as para 13 page 23) and continue to knit.
- 10. Double Hem** Cast on the single bed comb and knit the required number of rows. For 1" double hem knit 2". Now slightly push forward needles and rehook now open casting-on comb (as for reweighting). Remove the comb at the base of the knitting. Now with bodkin transfer each cast-on stitch onto the corresponding needle. Adjust the comb so that it secures both rows of stitches. For the first row only, push up leading cam to P. Rehook weights and continue knitting. To have a picot edge, after casting on knit 1" and make a row of buttonholes close to each other. Continue knitting for another inch. Now make double hem as described above.
- 11. To knit on** Old or partly finished garments can be knitted on by placing every stitch on a needle with a bodkin. Make sure that the knit stitches are hung on the front bed needles and the purl stitch on to the back bed. Bring in comb as for reweighting and hook on weights. For the first row only push up leading cams to P.
- 12. Fair-Isle** Select needles with which you want to knit in new colour. * Push these needles up into holding position, and knit one row with the basic colour. Now pull needles down to knitting position, open latch and lay in new colour, and pull only so far down as to catch wool between hook and latch. Lift up both centre cams and bring slide along to knit in new stitches. Keeping centre cams still out of action, return slide to the basic wool end to enable you to knit next row. Repeat this from * as often as required. However, if you want to knit both colours simultaneously, select needles for new colour, push them up so that basic colour comes beyond the latch of needle. Now place new colour between hook and latch, and bring slide across to knit it in. It is important that the laying-in wool is loose and free to be knitted in by the slide.

First of all remove single bed knitting bar. With the base of the single bed comb (see Accessories) extend all needles in working position approximately $\frac{1}{4}$ " beyond the edge of the needle bed (see that the stitches **do not** go behind the latch). With the left hand swing the work slightly outwards until all stitches are in the crooks of the needles. With the right hand in the middle of the single bed comb with the hooks already attached, take it up to the back of the work in between the needles, and lower it until each tooth is resting on the garment. See that it is evenly spaced over the knitting. Bring up weights now on this comb, and remove original comb. Lift the tension nearest the work for this row up to "P", remembering to set it to its original tension before returning. Knit two or three rows and then replace stocking stitch bar.

**13. Reweighting
the work
(Stocking-Stitch)**

Double-Bed Machine Patterns

Pattern No.	No.	Needle	Stitch
1	D	K.1, P.1, every other needle	
2	D	K.1, P.2, Zig-Zag	
3	D	Raindrops	
4	D	Double-row Lace-stitch	
5	D	Zig-Zag Lace-stitch	
6	D	Cable-stitch	
7	D	Tight rib with K.1, P.1, every needle	
8	D	Horizontal tucks	
9	D	Open work Pattern	
10	D	Arched Pattern	
11	D	Criss-Cross Pattern	
12	D	Pleating	
13	D	Large Zig-Zag Pattern	
14	D	Racking Pattern	
15	D	K.2, P.2, Rib	
16	D	K.2, P.2, Zig-Zag	
17	D	Stole Pattern	
18	D	Patent Herringbone Pattern	
19	D	Patent-Stripes	
20	D	Fisherman's Rib every other needle	
21	D	Half Fisherman's Rib or Half Patent Rib	
22	D	Fisherman's Rib Diagonal Pattern	
23	D	Full Fisherman's Rib	
24	D	Zig-Zag Pattern	
25	D	Zig-Zag Pattern	
26	D	K.2, P.1	
27	D	Simple Lace Pattern	
28	D	K.2, P.2, Zig-Zag	
29	D	Large Zig-Zag	

Weaving-Patterns for the Double-Bed

Pattern No.	No.	Needle	Weaving-Pattern
30	D		
31	D		
32	D		
33	D		
34	D		
35	D		
36	D		
37	D		Open Stole Pattern

Pattern for the Single-Bed

Pattern No.	No.	Needle	Stitch
1	S		Butterfly Pattern
2	S		Honeycomb Pattern
3	S		Lace Pattern
4	S		Knit according to Diagram
5	S		Lace-Pattern
6	S		Two-Coloured Stripes

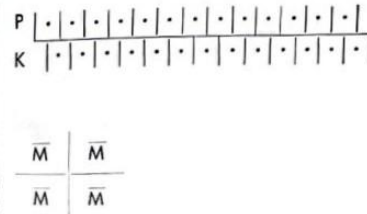
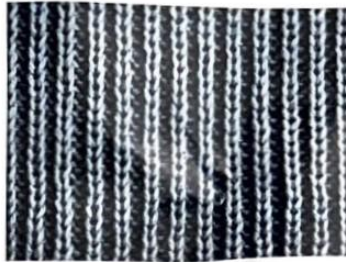
List of Illustrations

Illustration No.	Description
1	Cam-Box (from above and below)
2	Procedure of Knitting
3	Formation of a stitch
4	The 3 different needle positions
5	The Shuttle
6	The Wool-Guide
7	Latch-Needle
8	Casting-on
9	Diagram for Fisherman's Rib or raised Rib
10	Transferring from Rib to Stocking-Stitch
11	Casting-on for Single-bed
12	Increasing and Decreasing in the middle of fabric
13	Cast-on K.2, P.2, Rib
14	Double-Bed Machine
15	Single-Bed Machine
16	Parts of Knitting-Machine
17	Accessories to the Machine

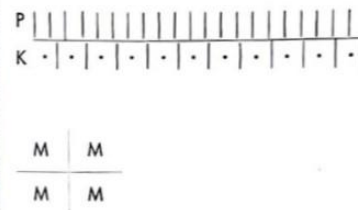
NOTE: PAGES 25 & 26 ARE BLANK PAGES IN THE MANUAL

Double Bed Machine Patterns

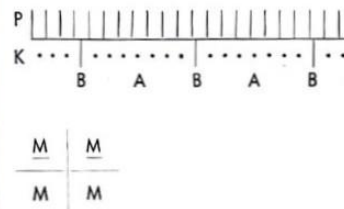
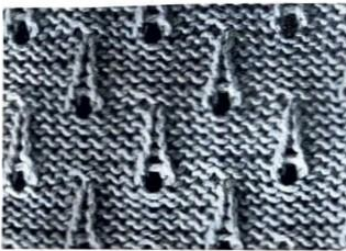
Pattern No. 1 (D)
 K.1, P.1, every other
 needle.
 Racking-lever position 0



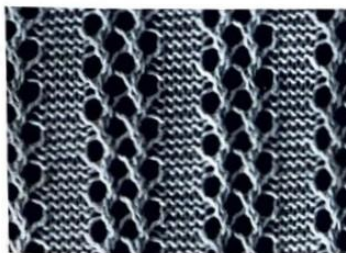
Pattern No. 2 (D)
 K.1, P.2, Zig-Zag.
 Cast on as for K.1, P.1, every
 needle. On the knitbed transfer
 every other stitch on to
 the next needle. Push down
 empty needles.
 Racking-lever position 3.
 Knit 1 row, move lever posi-
 tion 2. Knit 1 row, lever posi-
 tion 1. Knit one row move
 lever to 1, to 2, to 3, and so
 on.



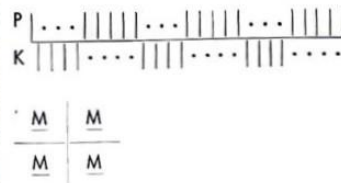
Pattern No. 3 (D) RAINDROPS
 Cast on as for pattern No. 1.
 Transfer all stitches to the back
 bed. Push empty needles down.
 On the front bed, push up
 every 8th needle, latch open.
 Knit 6 rows. Transfer each knit
 stitch on to the purl needle.
 Push B needles down. Push up
 A needles, latches open. Knit 6
 rows. Continue in this way with
 alternating positions.



Pattern No. 4 (D)
Double-row Lace-stitch.
 Cast on K.1, P.1, every needle
 and reset your stitches as shown
 below: (K.4, P.5) Knit 2 rows. *
 On the front bed only, transfer
 first stitch on to 2nd, 3rd stitch
 on to 4th. Leave empty needles
 up, latches open. Repeat this
 on each group of 4 to the end
 of row. Knit 2 rows. Again on
 each group of 4 stitches now
 transfer the 2nd stitch on to



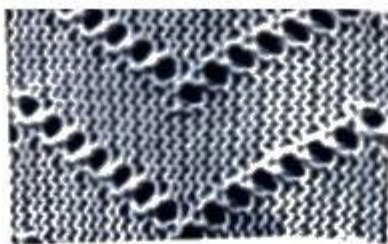
the 1st, and 4th stitch on to 3rd. Leave empty
 needles up, latches open. Knit 2 rows.
 Repeat from *



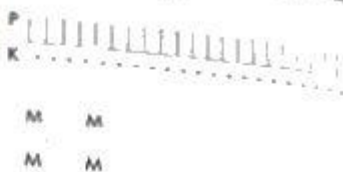
Pattern No. 5 (D)

ZIG-ZAG LACE-STITCH.

Cast on as pattern No. 1. Transfer all stitches to the back bed. On the front bed push up every 8th needle, latch open. Knit 2 rows. Transfer these stitches from the front bed on to the back bed. Push empty needles down. Push up every 8th needle, latch open. Knit 2 rows. Continue on



As you have pushed up the 12th needle, then back again to the 8th needle.



Pattern No. 6 (D)

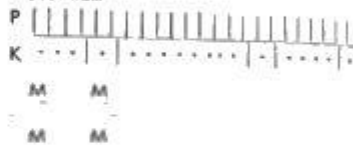
CABLE-STITCH.

Cast on K.1, P.1, every other needle. Transfer all knit stitches on to the back bed. Now bring up needles on the front bed as shown on the diagram. Knit 8 rows. * With a bodkin in each hand cross the 2 stitches on the front bed all along the row. (Always cross the stitches from right to left or from



left to right). Push up the leading tension slide to P for the first row after crossing has been made. Replace cam to tension and knit 8 rows (or as desired).

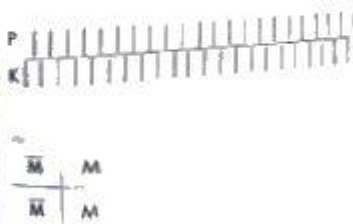
Repeat from *



Pattern No. 7 (D)

Tight rib with K.1, P.1, every needle.

Rocking-lever in position 1.



Pattern No. 8 (D)

Horizontal Tucks.

Cast on K.1, P.1, every needle (as on pattern No. 7). Knit 10 rows. * On the back slide lift up both centre-cams. On the front slide change (when slide is on the left hand side) the left hand tension to one below M. Knit 1 row. Bring other tension knob on the front slide -- the same tension one be-



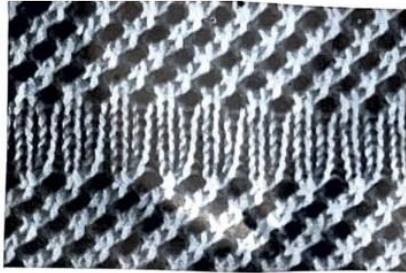
low M. Knit 4-6 rows. Replace centre-cams on the back slide, return front tensions to original setting (2 above M) and knit 10 rows. Repeat from *



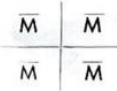
Pattern No. 9 (D)

Open Work Pattern

Cast on K.1, P.1, every needle. *
 O the front bed only transfer
 1st stitch on to 2nd, 3rd on to
 4th, 5th on to 6th, and so on.
 All needles remain in knitting
 position, open latches. Knit 2
 rows. Still working on the front
 bed only, transfer 2nd stitch on
 to 3rd, 4th on to 5th, and so



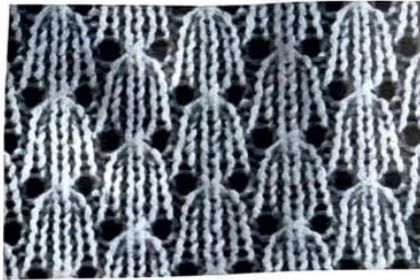
on. Repeat this approximately 5 times and start
 again from *



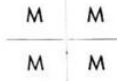
Pattern No. 10 (D)

Arched Pattern.

Cast on K.1, P.1, every needle. *
 On the front bed only transfer
 1st stitch on to 2nd, and 3rd
 on to 2nd. Now 7th stitch on to
 8th and 9th on to 8th. Continue
 in this way all along the line.
 Knit 4 rows. Now transfer 4th
 stitch on to 5th and 6th on to
 5th, and 10th stitch on to 11th



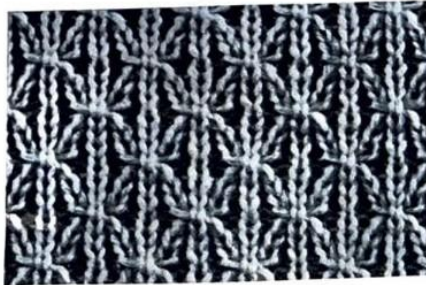
and 12th on to 11th. All along the line follow this
 pattern. Knit 4 rows. Repeat from *



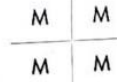
Pattern No. 11 (D)

Criss-Cross Pattern

Cast on K.1, P.1, every needle. *
 Knit 4 rows. On the front bed
 only, with a bodkin in each
 hand cross over the following
 stitches: 1st and 3rd, 5th and
 7th, 9th and 11th and so on.
 Knit 4 rows. Now cross over these
 stitches: 3rd and 5th, 7th and
 9th, 11th and 13th and so on.
 Knit 4 rows. Repeat from*.



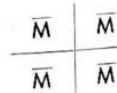
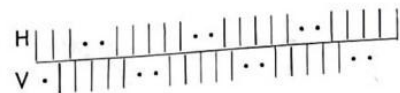
Remember to bring leading cams up to P every
 1st row after stitches have been crossed over. Re-
 place cams to normal tension after 1st row.



Pattern No. 12 (D)

PLEATING.

This pattern is best knitted in
 3-ply wool. Cast on K.1, P.1,
 every needle. Complete one cir-
 cular hem. Before joining trans-
 fer needles according to dia-
 gram below. (8th knit stitch onto
 9th purl, and 4th knit on to
 5th knit stitch. Repeat all along
 the line. Push down empty need-
 les to the bottom of the bed).



Pattern No. 13 (D)

Large Zig-Zag Pattern

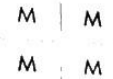
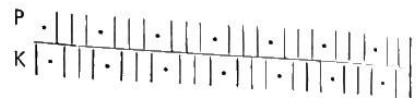
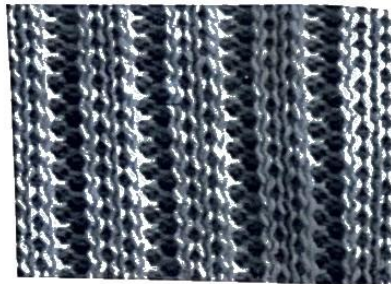
Cast on K.1, P.1, every needle. * From the left hand extreme position move racking-lever after every other row, as follows: 3-2, 2-1, 1-1, 1-2, 2-3. Repeat from *



Pattern No. 14 (D)

Racking Pattern.

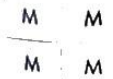
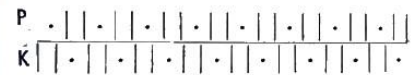
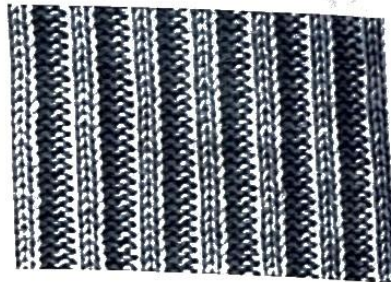
Cast on as shown below. * Racking-lever position. 1 Knit 1 row. Move lever to 2. Knit 1 row. Move lever to 1. Knit 1 row. Repeat * as from beginning.



Pattern No. 15 (D)

K.2, P.2, Rib.

Lever on 3 on extreme left. Set needles as shown below. 2 up 1 down, on both beds. Push slide across to open latches. Move lever into position 2 and cast on. After casting on move lever into position 3 and knit circular hem. Continue knitting.



Pattern No. 16 (D)

K.2, P.2, Zig-Zag.

Cast on as for pattern 15. Move racking-lever after every row from 3-2 and from 2-3.

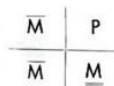
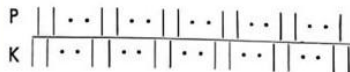
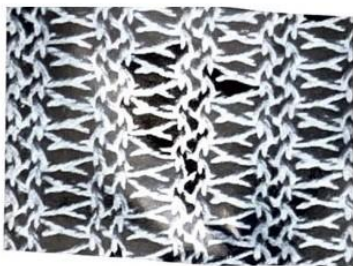


Pattern No. 17 (D)

Stole Pattern.

This pattern is knitted in car-digan stitch (half Fisherman's rib). Set needles as shown below. Move racking-lever in every 2nd row from 1-2 and back from 2-1.

Important! Pattern must end with 3 stitches on the right hand side on the back bed.



Pattern No. 18 (D)

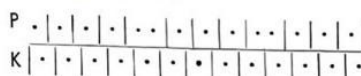
Patent Herringbone Pattern

Cast on K,1, P,1, every other needle. Lever position 0. After casting on, move lever to 1. * Knit 10 rows, changing position of lever before every row from 1-2 and back to 2-1. Now knit 1 row without changing position of lever.

Repeat from *



Important! During Zig-Zagging it will be found necessary to push up one extra needle at each end to keep correct needle position (see instruction on Fisherman's rib).



Pattern No. 19 (D)

Patent-Stripes.

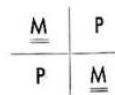
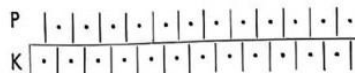
Tensions and setting of needles as for pattern 18. Change position of lever after every 2nd row from 1-2 and back from 2-1.



Pattern No. 20 (D)

Fisherman's rib every other needle.

Cast on according to the diagram. It is important to have the correct needle setting as shown in the diagram.



Pattern No. 21 (D)

Half Fisherman's rib or half Patent rib.

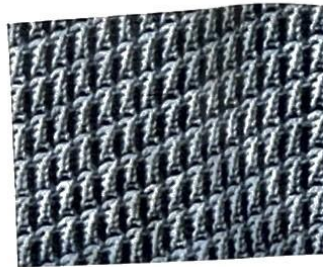
Needle setting as for pattern 20.



Pattern No. 22 (D)

Fisherman's rib Diagonal Pattern.

Tensions and needle setting as for pattern 20. * On the front bed transfer every 7th stitch on to the 7th stitch on the back bed. Leave empty needle in knitting position with open latch. Knit 2 rows. Now transfer every 8th stitch from front bed to 8th needle on back bed and leave empty needle up with



open latch. Knit 2 rows. Repeat the pattern row moving it 1 stitch to the right and knit 2 rows, until you have 9 stitches (or as many as you like) at the beginning of the row without pattern. Repeat from *.

Pattern No. 23 (D)

Full Fisherman's Rib.

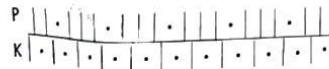
Cast on as for K.2, P.2, rib. Circular hem. Position of needles K.2, P. 2. Change to full Fisherman's rib (see instruction note for patent setting).



Pattern No. 24 (D)

Zig-Zag Pattern.

Cast on K.1, P.1, every needle. Rearrange the position of the needles according to the diagram. Move racking-lever from position 1-2 and from 2-1 and from 1-2, always knitting 1 row in between each movement.



Pattern No. 25 (D)

Zig-Zag Pattern

For casting on and position of needles see illustration 2. Move lever from 2-3 and back again from 3-2 then again to 3. Knit 1 row in between each movement.

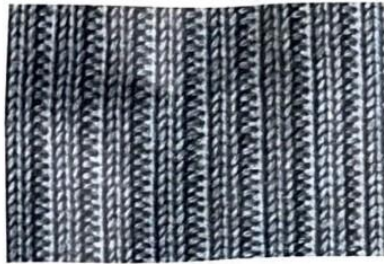


M	M
M	M

Pattern No. 26 (D)

K2, P2

For casting on and position of needles see illustration 23. This pattern can be knitted continuously.

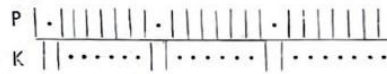


M	M
M	M

Pattern No. 27 (D)

Simple Lace Pattern

Cast on K,1, P,1, every other needle. Transfer the stitches according to the diagram. On the front needle bed transfer the first stitch on to the 2nd. Knit 2 rows. Now the 2nd stitch on to the 1st stitch. Knit 2 rows. Again 1st stitch on to the 2nd stitch, and so on. Leave empty needles in working-position with the latches open.



M	M
M	M

Pattern No. 28 (D)

K2, P2 Zig-Zag

Cast on K,2, P,2, lever in position 3 and knit 2 rows then to position 2, again knit 2 rows. Move lever to position 1, knit 2 rows, again knit 2 rows in position 2 and so on. (see illustration 13).



M	M
M	M

Pattern No. 29 (D)

Larg Zig-Zag

For casting on and position of needles see pattern No. 2 (D).
Lever in position 2. Knit 2 rows.
Move lever into position 3.
Knit 2 rows. Move lever back into position 2. Knit rows. Move lever into position 1 and knit 2 rows, again to position 2 and knit 2 rows and so on.

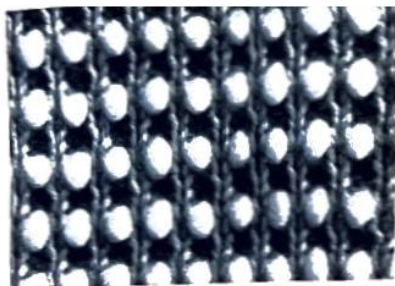


M M
M M

Weaving Patterns for the GIROTEX Double-Bed Machine

Pattern No. 30 (D)

Cast on K,1, P,1, every other needle. Lever in position 0.
Widen the gap between the needle beds. After every 3rd row lay the rug wool in between the needle beds. Hold the rug wool well down to prevent the wool from knitting into the needles.

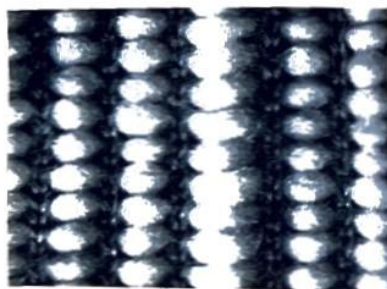


M M
M M

For 3 or 4 ply wool.

Pattern No. 31 (D)

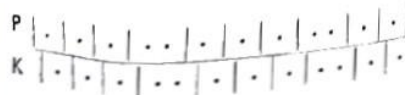
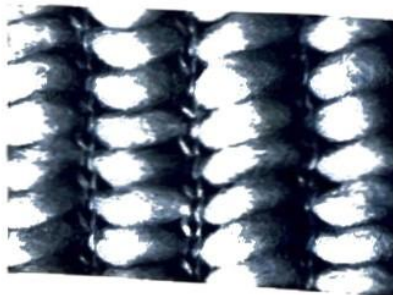
Cast on according to diagram. Using a 2-ply wool. Lay over rug-wool. Knit 1 row. Lay over rug wool and knit 1 row. Zig-Zag each row, from 1-2, from 2-1 and from 1-2 and so on.



M M
M M

Pattern No. 32 (D)

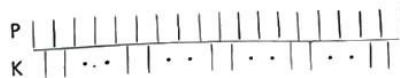
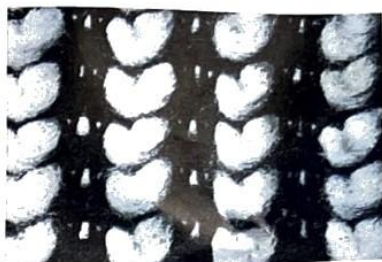
Cast on K,1, P,1, every other needle and transfer stitches according to diagram. Knit 1 row. Lay over rug-wool, knit 1 row and so on.



M M
M M

Pattern No. 33 (D)

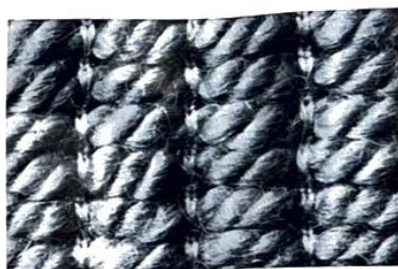
Cast on K.1, P.1, every needle.
Transfer stitches according to diagram using 2-ply wool. Every 3rd row lay over the rug-wool.



M M
M M

Pattern No. 34 (D)

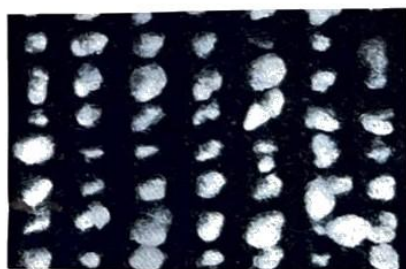
Cast on K.1, P.1, every needle.
Transfer the stitches according to diagram using 3-ply wool. Knit 3 rows. Lay over rug-wool. Knit 3 rows and so on.



M M
M M

Pattern No. 35 (D)

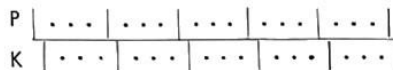
Cast on K.1, P.1, every other needle using 4-ply wool. Lay over soft rug-wool. Knit 1 row. Lay over the rug-wool. Knit 1 row. Repeat.



M M
M M

Pattern No. 36 (D)

Cast on according to diagram with lever in position 1 on left hand side. Use 2-ply crochet cotton. Move lever after each row. From 1-2, from 2-1 and

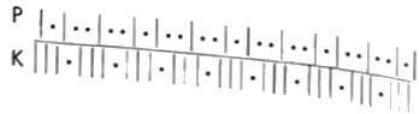
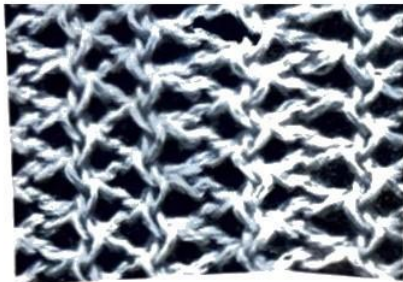


M | M
M | M

Pattern No. 37 (D)

Open Stole Pattern

Cast on K.1, P.1, and transfer according to diagram. Racking lever on left. Change lever from pos. 1 to pos. 2 after every 2nd row when slide on left hand side.



P M
M P

Patterns for the Single-Bed

Pattern No. 1 (S)

Putterfly Pattern

Knit 4 rows. Drop every 4th stitch down 4 rows and pick up with crochet hook. Pass behind 3 loops, knit 4th and pull through and over the front of the work. Replace the stitch on the needle. Knit 4 rows and repeat same pattern. This time start to drop the 2nd stitch and every 4th all the way along the row.



M M

Pattern No. 2 (S)

Honeycomb Pattern.

Knit 4 rows. * Push up every 4th needle into holding position. Knit 4 rows. Push up now all the needles into holding position, lay a new coloured wool into the needles and knit one row. Starting now with 2nd needle pushed into the holding position and every 4th all along the line. Repeat from *



M M

Pattern No. 3 (S)

Lace Pattern.

Cast on. * Transfer every 8th stitch onto the 7th all along the row. Leave empty needles in knitting position with open latch. Knit 2 rows. Now transfer every 9th onto 8th, 17th onto 16th, 25th onto 24th and 7th onto 8th, 15th onto 16th, 23rd onto 24th and so on. Empty needles remain in knitting position latch open. Knit 2 rows. Repeat from *

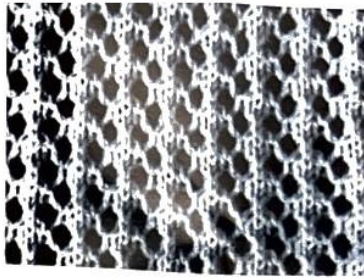


M M

Pattern No. 4 (S)

Lace Pattern.

Knit 2 rows. * Transfer 5th and 7th stitches onto the 6th all along the line. Empty needles remain in knitting position with open latch. Knit 2 rows. Now transfer 2nd and 4th stitches onto the 3rd, 8th and 10th onto



9th, and 14th and 16th onto the 15th all along the row. Knit 2 rows. Repeat from *

M | M

Pattern No. 5 (S)

Knit According to Diagram.

Knit 3 rows. Push up centre needle in each group of five stitches into holding position. Knit 3 rows. Now bring back needles from holding position by laying in wool into needles as slide is brought along. Knit one row and repeat currently.

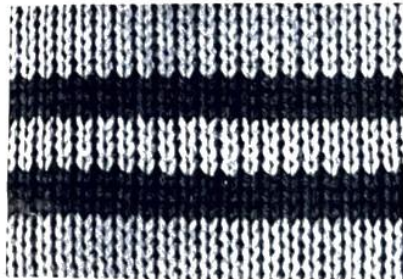


M | M

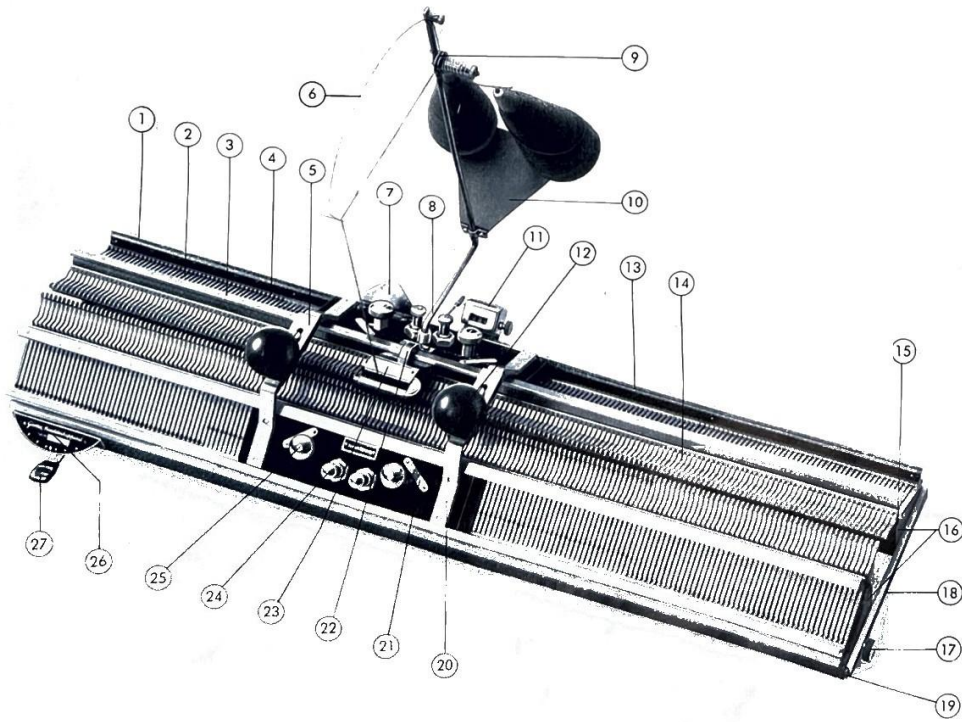
Pattern No. 6 (S)

Two-coloured Stripes

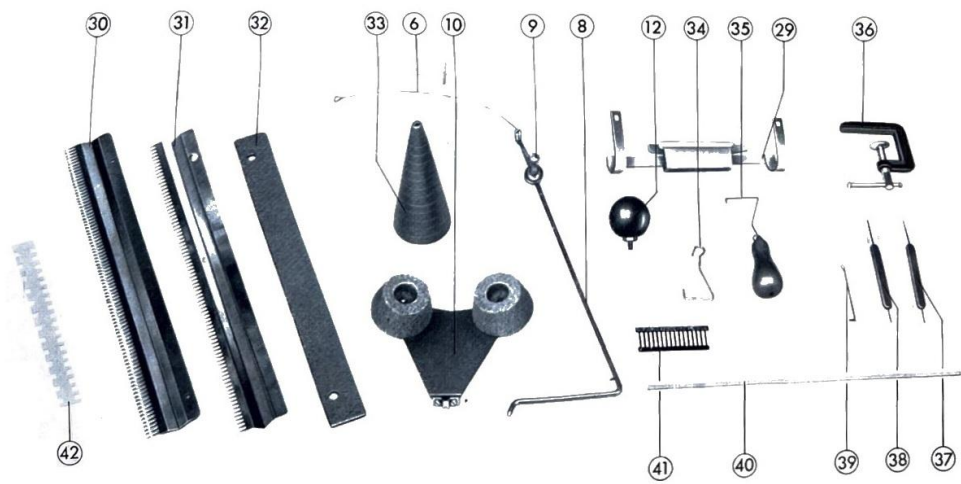
Cast on every needle. * Knit as many rows as required of one colour. Change wool and insert new colour, knit as many rows as required. Repeat from start. *



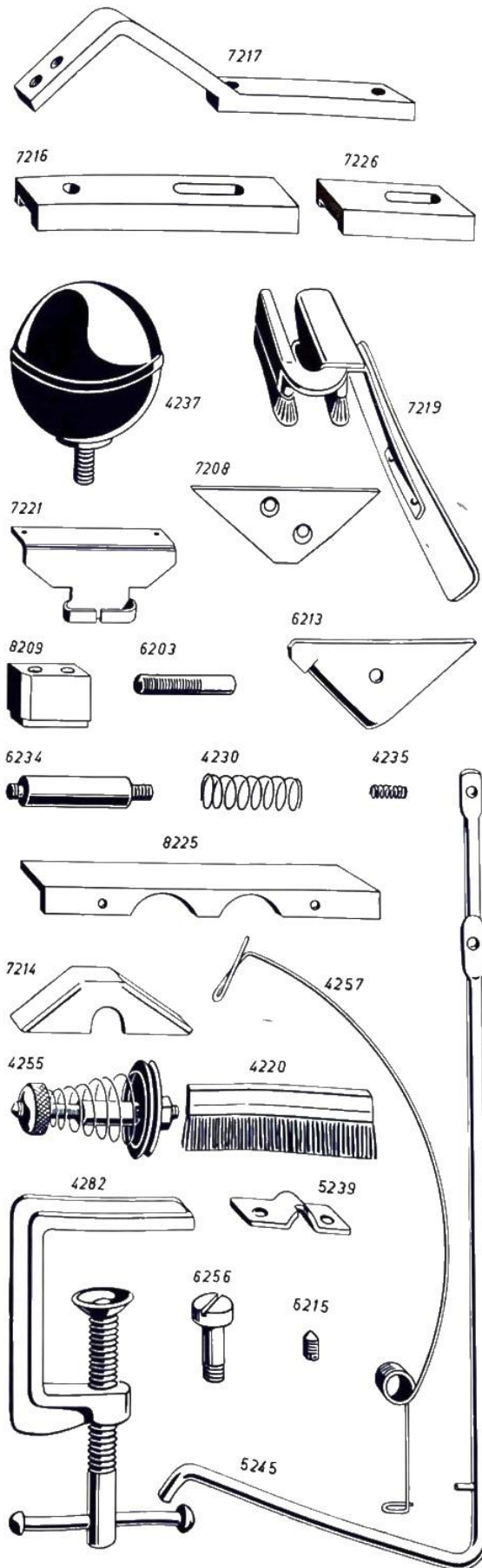
M | M



- 1. Bottom rail
- 2. Needle bed
- 3. Top rail
- 4. Latch needle
- 5. Slide connecting bracket
- 6. Wool tension spring
- 7. Row-counter trip
- 8. Cone-stand upright
- 9. Wool tension assembly
- 10. Cone-stand
- 11. Row-counter
- 12. Handle-knob
- 13. Needle-counter
- 14. Grub-screws
- 15. Foam-rubber strip
- 16. Chassis
- 17. Serrated screw
- 18. Outer-side bracket
- 19. Inner-side bracket
- 20. Slide-bracket
- 21. Tension scale
- 22. Shuttle carrier
- 23. Wool-guide
- 24. Centre-cam knob
- 25. Tension knob
- 26. Number plate
- 27. Racking-lever

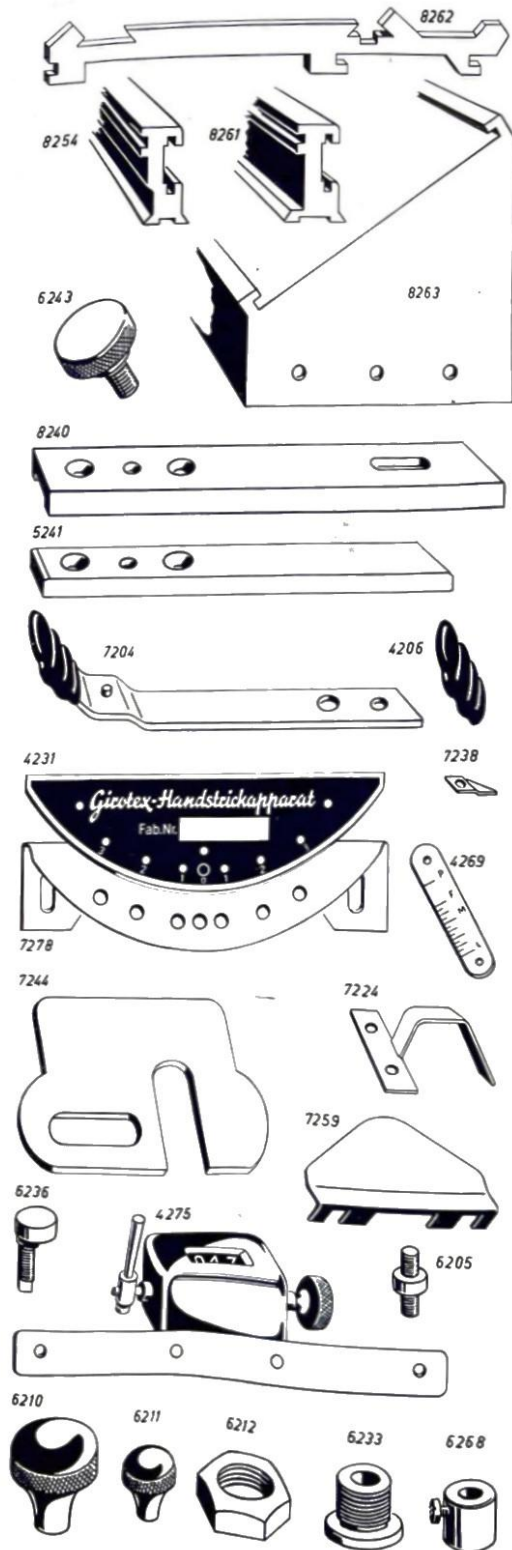


- 6. Wool-tension spring
- 8. Cone stand upright
- 9. Wool-tension assembly
- 10. Cone stand
- 12. Handle-Knob
- 29. Stocking stitch bar
- 30. Double bed casting-on comb
- 31. Single bed casting-on comb
- 32. Weight
- 33. Cone
- 34. Hook for weights
- 35. Side weight
- 36. Clamp
- 37. Bodkin-Crochet hook
- 38. Bodkin-Point
- 39. Needle
- 40. Foam rubber band
- 41. Bodkin comb
- 42. Needle selector



Order No. for accessories

- 7217 Slide bracket
- 7216 Slide connecting bracket
- 7226 Pressure-bar bracket
- 4237 Knob-handle
- 7219 Shuttle
- 7221 Wool-guide of shuttle
- 7208 Tension-regulator cam
- 8209 Tension-regulator holder cam
- 6203 Bolt for cam holder
- 6213 Centre-cam section
- 6234 Centre-cam bolt
- 4230 Centre-cam spring "A"
- 4235 Centre-cam spring "B"
- 8225 Centre-cam angle bracket
- 7214 Needle bridge
- 4225 Wool-tension assembly
- 4257 Wool-tension spring
- 4220 Shuttle brush
- 4282 Clamp
- 5239 Cone stand bracket
- 6256 Cone upright screw
- 6215 Grub-screw (needle bed)
- 5245 Cone stand upright



Order No. for accessories

8262 Needle bed

8254 Top rail

8261 Bottom rail

6243 Serrated screw

8263 Chassis

8240 Outer-side bracket

5241 Inner-side bracket

7204 Racking-lever

4206 Racking-lever handle

4231 Number-plate

7238 Tension-regulator pointer

4269 Tension-scale

7278 Needle bed setting-plate

7244 "G"-Plate

7224 Shuttle carrier

7259 Row-counter-trip

6236 Eccentric bolt

4275 Row-counter

6205 Racking-lever bolt

6210 Tension-regulator knob

6211 Centre-cam knob

6212 Centre-cam nut

6233 Centre-cam bush

6268 Cone upright collar
