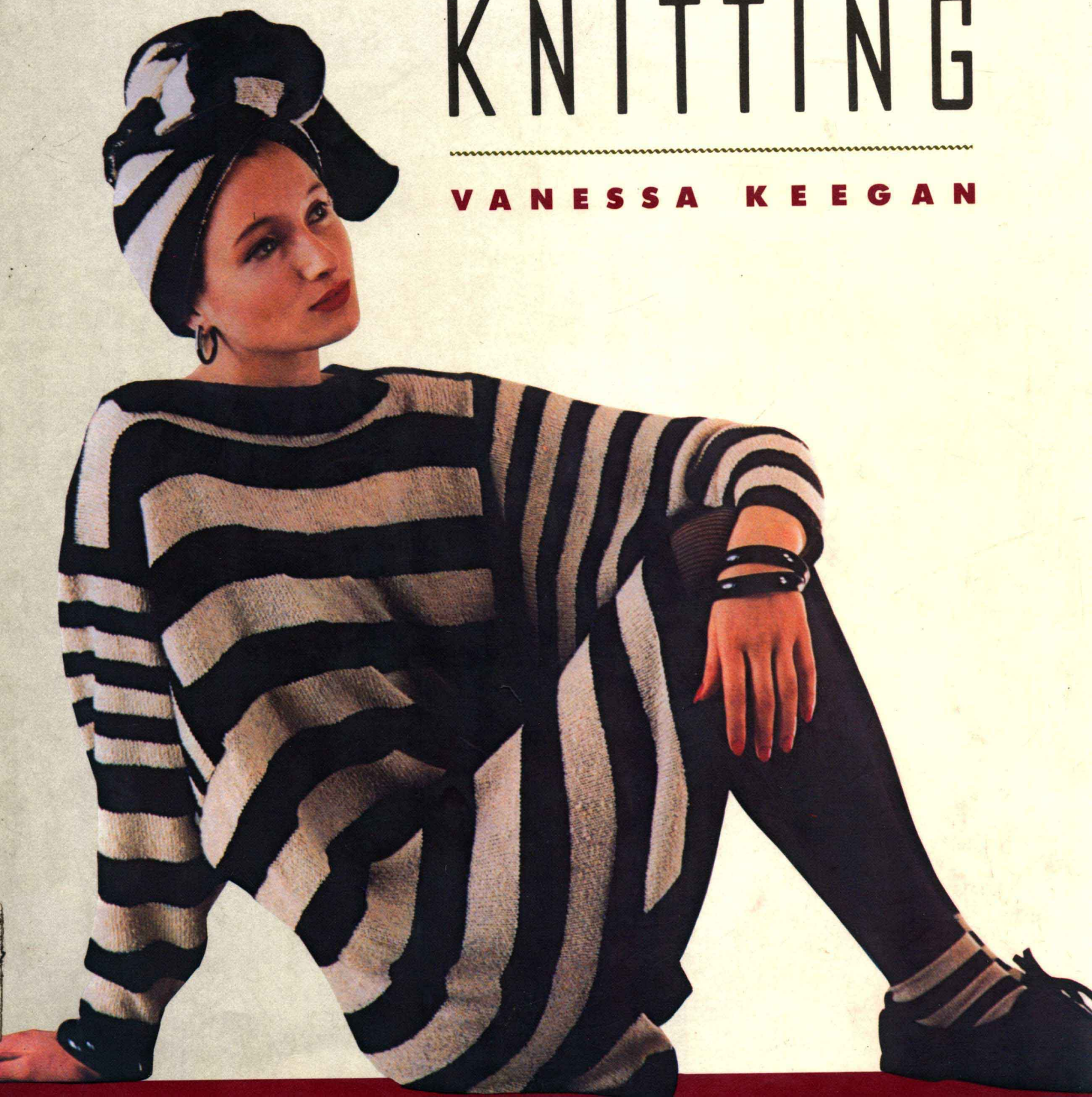


D E S I G N E R

MACHINE

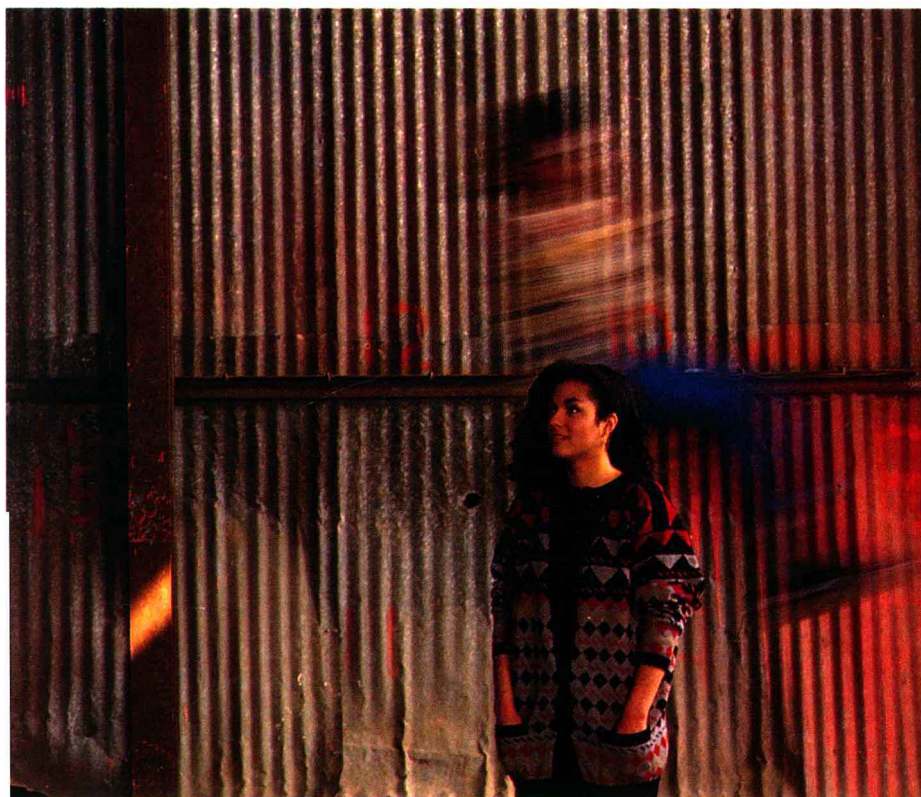
KNITTING

VANESSA KEEGAN



D E S I G N E R

**MACHINE
KNITTING**



V A N E S S A K E E G A N

Photography by Pablo Keller



Pantheon Books New York

For Mum and Marcus

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Knitted in cotton, with short sleeves and a band of black diamonds above the body ribs and along the sleeve tops.

TRANSATLANTIC 31

Babe Ruth 32

This two-toned cardigan can be worn with the skirt as a suit or on its own. It has two practical pockets, contrasting sleeves and ribs.

Babe Ruth Skirt 35

This skirt is a feminine alternative to the baseball image, and is simple to make.

Baseball 36

A practical cardigan with obvious references to the classic baseball jacket. The inset collar stripe also appears on the ribs.

Eldorado 39

All the romance of the classic Caddy. You could easily use this chart in conjunction with a basic adult's pattern.

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This design takes a lot of patience to produce, but the finished effect is always treasured.

New Jersey 47

Dynamic sports sweater in cotton or wool. It can be made with either a collar or crew neck.

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Shetland 51

The two flecked yarns create a subtle blending of colours, enhanced by the fringe pattern. The V-neck, with overlapping inset collar, can be turned down or left snug around the neck.

Shetland Skirts 55

Two simple and practical skirts which complement the Shetland sweaters.

Fish Bone 56

This repeated fish-bone pattern works with almost any background colour. Knitted in a cotton yarn, it would make a cool spring sweater.

Carrots 61

Oversized and warm for winter, the stylized carrot creates a stencilled effect. If desired, change the background colour, keeping the pattern dark.

Windfall 63

This leaf motif cardigan has two handy pockets and a V-neck. The narrow front ribs are knitted in two pieces, joining at the centre back.

Windfall Dress 66

A simple dress slightly shaped at the waist, with turnover collar and deep armholes narrowing to cuffs.

ETHNOGRAPHIC 69

Braided Zigzag 73

Can be worn as a dress or oversized sweater, belted or straight. You could alter the length by omitting a zigzag repeat.

Block Print 75

Traditional shape with an unconventional pattern, comfortable crew neck and armholes. This design is most successful with a neutral background.

Lotus 78

This design is derived from the lotus flower. Keeping the background neutral, you could use alternative colours in the patterning.

Lotus Child 81

A scaled-down version of the adult's Lotus sweater, making a warm and practical sweater for a boy or girl.

Diamond Dress 84

A warm winter dress worn belted or straight. The length can be altered by omitting a sequence of the diamond repeat.

Rough Diamond 87

A colourful, relaxed woollen cardigan with practical pockets, ideal for winter, or, alternatively, in cotton with paler colours for spring.

SUMMER CLASSICS 91

Black & White 93

This sweater is most successful in a yarn which allows it to drape. It has a boat neck with collar and narrower stripes at the sleeve inset.

Tea Rose 95

This simple, cabled camisole top is perfect for summer, and makes a practical twin-set when worn with the Tea Rose Cardigan.

Tea Rose Cardigan 97

This traditional cardigan with pockets and small neat ribs also has three rows of cables running down the centre back. Glass buttons enhance its antique feel.

Silk Skirt 100

This slender skirt is simple to make. The length can be altered by adding or omitting rows. It could also be worn with the Tea Rose Cardigan.

Cabled Silk 101

A simple top with a series of narrow cables around the neck. Worn on its own or with the skirt, it is easily made in a beautiful silk yarn.

Metropolitan 103

The use of silk and wool mixed yarn gives this sweater dress an interesting surface. It works best in fairly neutral colours using different shades of the same colour.

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Squares 107

A simple, effective pattern using flecked wool. Random squares are selected in different colours.

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This is a cropped version of the man's Squares sweater. It is in a reverse colourway with randomly selected squares.

Oak Leaf 112

This Oak Leaf sleeveless cardigan has a plain back with fine ribs, two small pockets and an optional half belt.

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This expressive polka dot cup design creates the impression of flying crockery. The collar gives an alternative neck detail.

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This simple embryonic spiral creates a paisley effect, keeping its light-hearted title ambiguous.

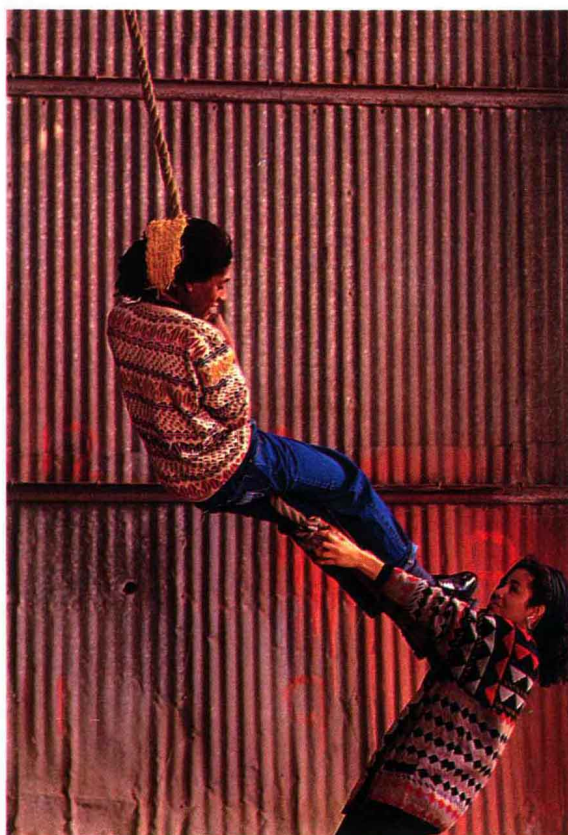
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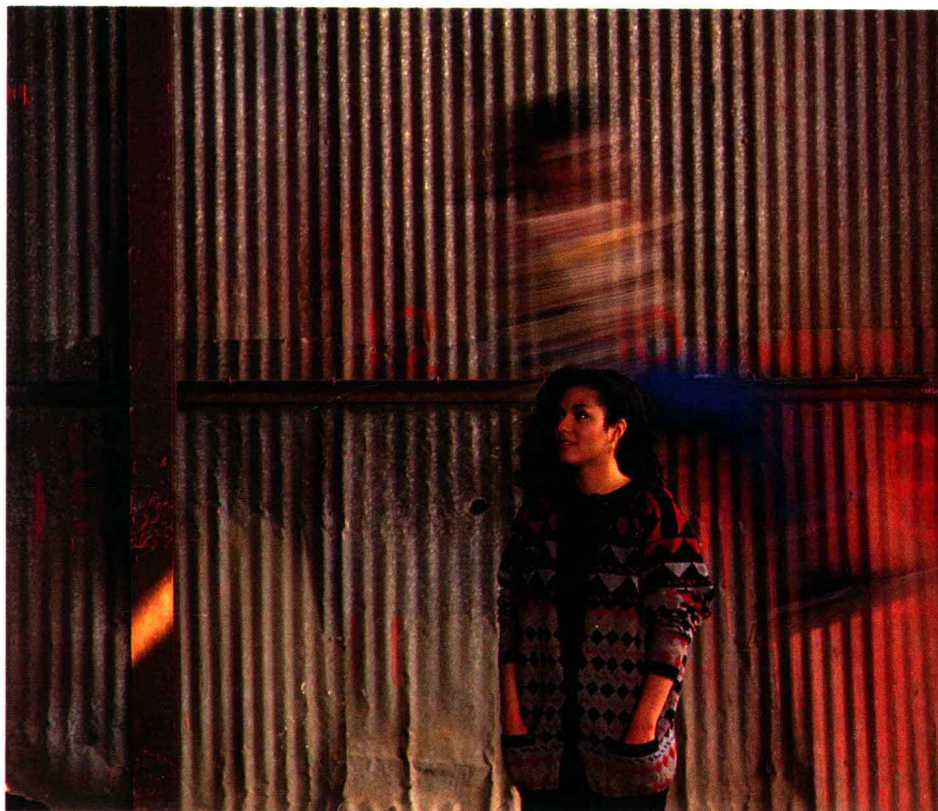
D E S I G N E R

MACHINE KNITTING



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**MACHINE
KNITTING**



V A N E S S A K E E G A N

Photography by Pablo Keller



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Preface

8 Edith Sitwell once wrote of Virginia Woolf 'I enjoyed talking to her, but thought nothing of her writing. I considered her a beautiful little knitter.' The association of 'knitter' with the diminutive 'little' illustrates precisely how knitting has been downgraded as a form of expression primarily because most of its practitioners are women. However, in recent years, interest in hand-knitting and the many diverse hand-knit publications have encouraged and inspired both practised knitters and those wishing to learn the craft. Machine knitting, on the other hand, has always been its rather unglamorous sister: many potential knitters confident enough to buy the machines in the first place have quickly lost interest because of the uninspiring patterns and lack of encouragement. I

hope this book will help to redress the balance.

The main advantage of machine knitting is obviously speed, although this is not an end in itself. It is in the design process where its main attraction lies. Machine knitting frees creative energy and enables the quick exploration of ideas. In my experience, designs which have taken a lot of time and effort to make, but which in the end are not successful, are not easily discarded.

Many newcomers to the knitting machine are daunted by it, yet the machines are relatively simple and robust, so try not to be inhibited by the machine itself. By starting with a simple design, you will gradually begin to master all the technical ramifications.

There is enormous satisfaction to be

gained from producing a sweater for yourself, a friend or a relation, and I have tried to ensure that whatever the ability of the knitter, there is a selection of patterns available. Whether you simply want to make a sweater as instructed, or prefer instead to use a pattern as a starting point for altering or creating your own designs, I hope this book conveys my enthusiasm for the relatively unexplored art of machine knitting. Some of these designs have been sold ready-made to discerning high-fashion shops, so it gives me a lot of satisfaction to enable the knitter to make them at a fraction of that cost, and thus reach a larger audience.

*Vanessa Keegan
April 1988*



Technical Hints

BEFORE YOU START

Machines

On a knitting machine, the distance between the needles within the bed determines which thickness of yarn can be knitted on it: this is called the gauge. Fine-gauge machines are used for knitting fine industrial-type yarns, standard-gauge machines for knitting anything from 2 ply (fingering) to a fine double knitting (knitted worsted) weight, and chunky machines for the more usual hand-knitting and fancy yarns.

All the garments in this book have been knitted on standard-gauge machines, and each pattern states which type of machine is needed to produce a particular stitch pattern.

The simpler, plain and striped garments can be made on any basic model. These machines are usually bought by the beginner who wants a moderately priced machine to learn on, the very simplest machine starting at around £80 (\$128). They are able to knit simple patterns by selecting the needles, either manually or by pressing buttons, on every row.

Next come the punchcard models, which can produce all-over repeating patterns or single motifs. The pattern is first punched, as holes, on to a plastic sheet and then fed into the machine.

These machines restrict you to a set number of stitches, generally 24, across the width of the pattern.

Finally, in the higher price range of around £800 (\$1,280) or more, come the electronic machines. These are far more complicated to learn but have the advantage that patterns can be worked over any number of stitches up to 60 in width. The patterns for these machines are simply marked on to special sheets of paper, using the pen provided.

On all the garments in this book the ribbed welts (ribbings), cuffs, collars and borders have been made by using a ribbing attachment, but, as this is quite an expensive optional extra, all the patterns include instructions on how to work them on a single-bed machine.

The two children's sweaters, Eldorado and Trucking, have been knitted using the intarsia technique. Not all machines can do this without a special intarsia carriage, so

check your instruction manual to see if an extra attachment is needed.

Before following any of the patterns, check with your instruction manual whether the techniques given in the pattern are correct for your machine. If you are following a punchcard pattern, for example, you may not need to set the carriage one row before starting to knit the pattern; if you do, you may drop some of the stitches. Also, on some of the older punchcard machines the background and second colours are reversed so that the holes punched in the card represent the background colour.

If you are not sure which techniques are right for your machine, knit a small swatch of the stitch pattern first to see which settings you should use to achieve the desired result – this swatch can then be used to check your tension.

Yarn

Within each pattern yarns have been specified for use in making your garment. If you use the correct yarn and achieve the correct tension, you should be completely satisfied with the completed garment.

If you cannot easily obtain the correct yarn, you can substitute a yarn of similar thickness. To do this satisfactorily, check first on the approximate thickness of the yarn, the tension it knits to, and the composition.

If you are not sure, see if you can purchase a small amount of the yarn first in order to try it out and compare it with the look of the yarn in the picture. Check to see that it knits to the correct tension without looking so loose that the garment will not hold its shape or so tight that it will not hang correctly. Finally, remember that the quantities stated are approximate and that if you use a different yarn, the amount of the yarn you choose could vary quite considerably from that quoted.

Tension

All the measurements of each garment have been calculated according to the number of stitches and rows worked to a given tension. This means that if the pattern quotes 27 stitches and 39 rows to 10 cm (4 in) measured over stocking (stockinette) stitch with a tension-dial setting of approximately 7, it is vital that you achieve the tension of 27 stitches and 39 rows, although the tension-

Abbreviations

alt	alternate(ly)
beg	beginning
cm	centimetre(s)
cont	continu(e)(ing)
dec	decreas(e)(ing)
fol	following
g	grams
HP	holding position
in	inch(es)
inc	increas(e)(ing)
K	knit
mm	millimetres
MT	main tension
MT-1, MT-2, MT-3	one, two or three full sizes tighter than main tension
MT+1, MT+2, MT+3	one, two or three full sizes looser than main tension
MY	main yarn
NWP	non-working position
N	needles
oz	ounces
P	purl
patt	pattern
RC	row counter
rem	remain(ing)
rep	repeat
st(s)	stitch(es)
st st	stocking stitch (stockinette stitch)
tog	together
UWP	upper working position
WP	working position
WY	waste yarn

Advice for American knitters

Most of the terms in this book are the same in English and American terminology. The main differences are between the metric and imperial measurements and weights. Where appropriate, the imperial measurements and weights have been given after the metric ones within every pattern.

The terms which vary are given with their equivalents below:

10

UK	US
cast off	bind off
slipstitch	tack down
stocking stitch	stockinette stitch
tension	gauge
4 ply	sport
double knitting	knitting worsted
Aran	fisherman
chunky	bulky
colourway(s)	choice of colour(s)

dial setting is not so important and could be as low as 5 or as high as 9 as long as it produces the correct tension.

When working a tension swatch, always cast on at least 10 more stitches and work at least 10 more rows than quoted in the tension specified to give an accurate reading.

Punchcards and charts

On the patterned garments in this book it is necessary to punch the designs on to a punchcard or mark up on to the special sheets for the electronic machines.

Most punchcard machines have the contrast colour as the one which is translated into the holes on the card, but check with your instruction manual to see if this is true of your machine. There is usually a minimum number of rows required in order that the punchcard can be formed into a circle and clipped together. Again check with your instruction book, and if the pattern repeat does not give enough rows, then just punch the pattern twice in order to give enough rows. Always take note, perhaps when working your tension sample, of the row number marked on the punchcard that signals that the first row of pattern is to be knitted. Different machines need a different number of rows for the card to be wound into the machine before the punched holes are read, and if the correct make of punchcard is not easily available for your machine, then the card you use may not necessarily show row 1 when the first row of pattern is about to be knitted.

Electronic machines differ from punchcard machines in the way they set and read the pattern. They also give far more choice in that, at the flick of a switch, the pattern can be reversed, turned upside down or have the colours reversed. Again,

check with your instruction manual whether a minimum number of rows is required for the pattern and also whether it needs to be marked in reverse, as with the punchcard machines.

You will see throughout this book that all the charts seem to be the wrong way round to the pattern on the garments. This is because you always work with the back of the work facing you. As soon as you turn the work the right way round, the patterns will look the same as in the pictures.

There can be no hard and fast rules for marking up a punchcard or pattern sheet, as new models are coming on to the market all the time, so if you have any questions, please follow the only rule that is always true: check with the instruction manual for your machine.

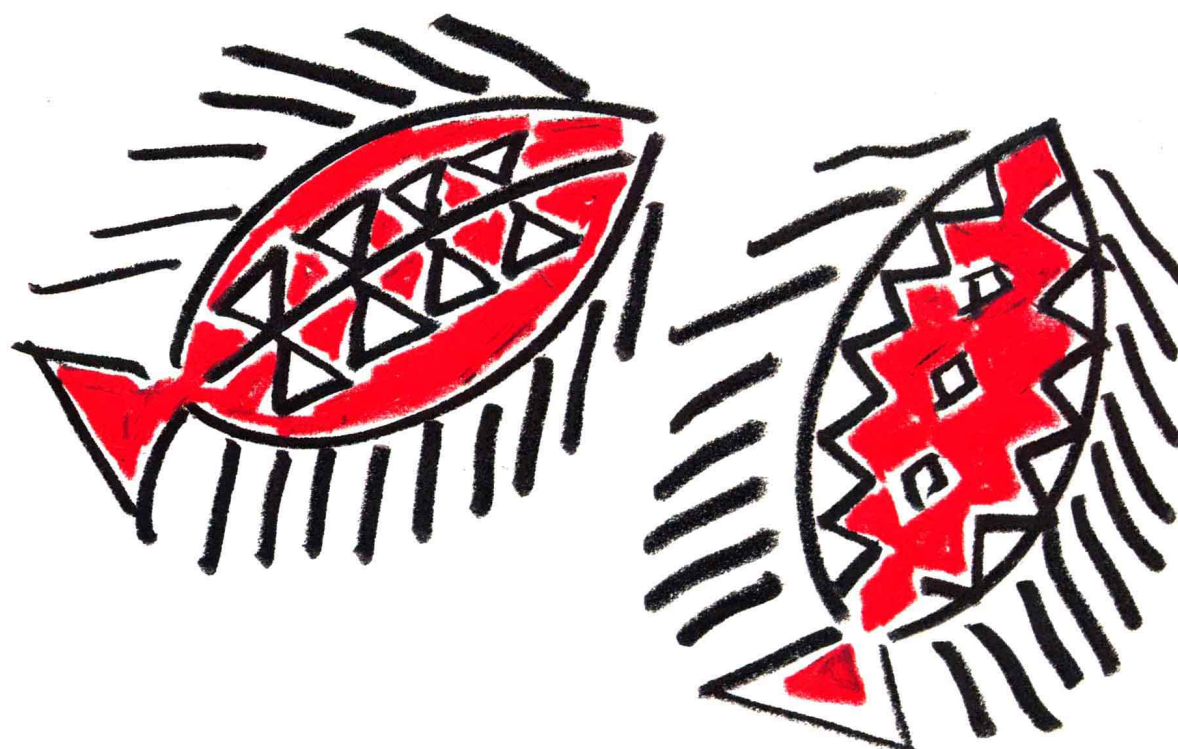
Floats

A few of the garments have large colour patterns which leave long floats on the inside of the fabric. Although they have been kept to a minimum, these can be a nuisance, especially in the sleeves.

If you are afraid that these floats might catch and spoil the look of your garment, there are two methods of dealing with them. The first is to use iron-on interfacing fabric to cover the floats, although this can be a little bit tricky to put on properly. The second is to use thread matching the main yarn and catch (tack) down the floats to the inside of the garment at regular intervals.

Measurements

The measurements on the diagrams and patterns are given throughout in both centimetres and inches. The figures in brackets refer to the larger sizes; if only one figure is given, then this refers to all sizes.

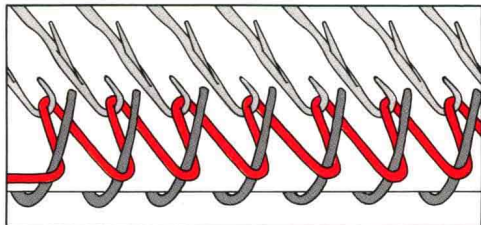


TECHNIQUES

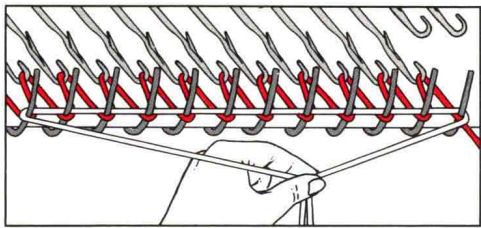
Casting on

There are two main methods of casting on in machine knitting. The first is the nylon-cord method, which is very quick and easy but leaves an unfinished edge and so is only suitable for tension swatches, stitch samples or casting on with waste yarn when making a hem. The second is the closed-edge method, which is a little slower, but gives a neat finished edge that resembles the hand-knit method of casting on.

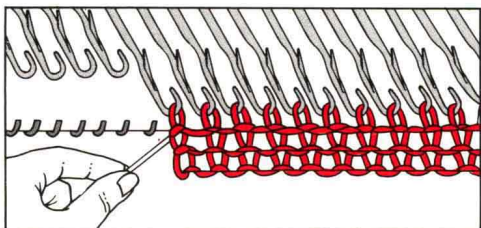
Casting on with nylon cord



1. Bring forward the required number of needles to working position. Thread the carriage with the main yarn and set the tension slightly looser than the main tension for the yarn. Holding the end of the yarn from the carriage down below the needlebed, move the carriage from right to left over the needles so that the main yarn forms a zigzag between the hooks on the needles and the sinker posts.

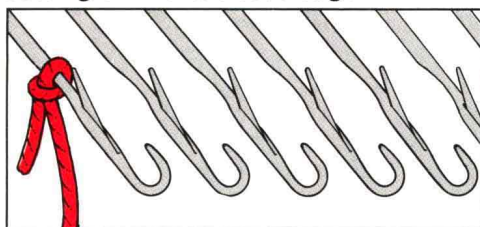


2. Take out the nylon cord, supplied with the machine, and lay it over the zigzag formed by the main yarn, making sure that it passes between the needle hooks and the sinker posts. Hold both ends of the nylon cord firmly with the left hand beneath the needlebed, pulling it tightly against the main yarn. Set the tension to main tension.

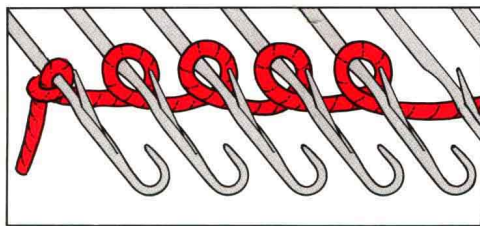


3. Set the machine to knit all the needles, and knit about six rows. Carefully pull out the nylon cord from one end, then continue to knit as required.

Casting on with a closed edge



1. Bring forward the required number of needles to holding position. Set the machine to knit all the needles and the tension to main tension. Thread the carriage with the main yarn and make a slip loop near the end of the yarn. Place this loop over the needle furthest away from the carriage.

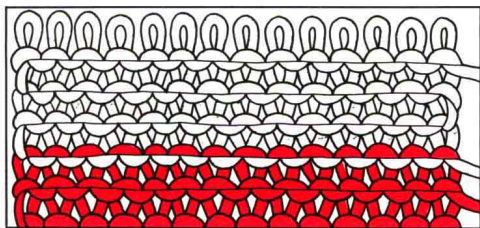


2. Holding the main yarn in your right hand, wind it anticlockwise round each needle, working from left to right. When winding the yarn, keep it fairly loose; otherwise, the loops formed on the needles will not knit properly when the carriage is passed over them. When the yarn has been wound round all the needles, pull back the yarn through the tension mast to take up any slackness, then knit the row. Continue knitting as required.

Casting off (Binding off)

The two most common methods of casting off are taking the fabric off on to waste yarn and the transfer-tool method. The first is quick and simple, ideal for tension swatches and stitch samples, or when stitches are to be picked up again at a later stage in making the garment. The second method is used when shaping at a neck or armhole, or if a closed, finished edge is required.

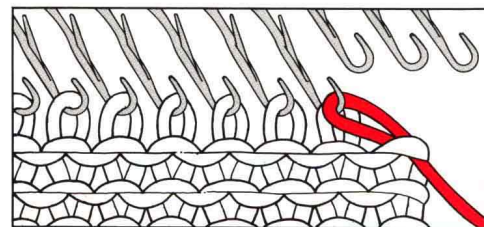
Casting off with waste yarn



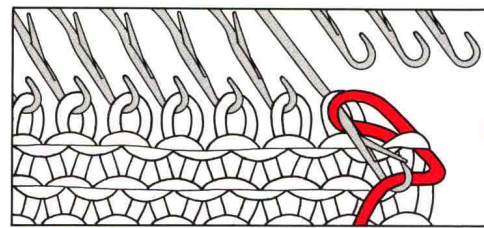
On completion of the required number of rows in main yarn, break off the yarn and unthread the carriage. Rethread the carriage with a contrasting yarn of similar thickness to the main yarn, and knit about six rows. Break off the contrast yarn and unthread the carriage. Remove any weights from the work. Then, supporting the fabric with your free hand, run the carriage once across the stitches, causing them to 'drop off' the needles. The waste yarn will hold the stitches in main yarn securely until required later.

Casting off (binding off) with a transfer tool

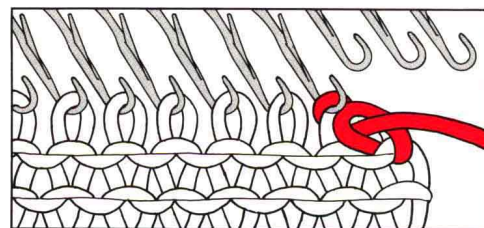
On completion of the required number of rows in the main yarn, end with the carriage at the right-hand side of the needlebed.



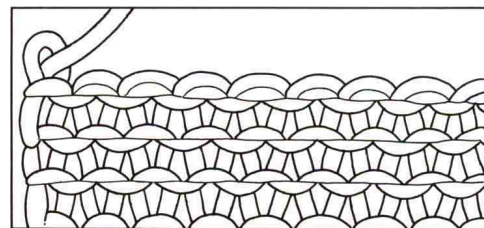
1. Using the single transfer tool, move the first stitch at the right-hand side on to the adjacent needle to the left, so that there are two stitches on this needle. Push the empty needle back into non-working position.



2. Push the needle holding two stitches forward so that both stitches lie behind the latch, leaving the latch in the open position. Take the yarn from the carriage in your left hand and lay it loosely across the hook, then close the latch over the yarn.



3. Holding the needle butt in your right hand, gently draw the loop of yarn in the needle hook through the two stitches behind the latch, then place the needle back into working position.



4. Repeat steps 1 to 3 until the required number of stitches have been cast off. If you are casting off all the stitches, break the yarn and thread it through last stitch, pulling up tightly to secure. In order to prevent the stitches being cast off too tightly, and to give an even finish, pass the yarn used for casting off in front of the sinker post between each cast-off stitch. This will have the effect of holding the knitting on the machine until the casting off is complete, when it can then be carefully lifted off.