

PASSAP[®]
DUOMATIC

Tuition Guide

Z. 2343

Tuition Guide for PASSAP DUOMATIC

Indications in brackets refer to the corresponding pages or figures in the DUOMATIC instruction book. The customer should perform all operations on her own.

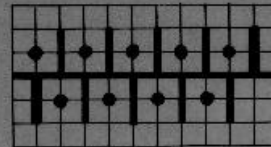
CHAPTER I

- 1) Unpacking and first acquaintance with (p. 2) as well as setting up of the machine (p. 6).

By marking with ball pen check all parts according to the instruction book (p. 4-5).

Short explanation of technical terms:

- Inserting the racking handle (Fig. 16))
- Fixing the eyelet support (Fig. 17)) page 6
- Inserting the strippers (Fig. 19))
- Inserting the mast of the wool feed (Fig. 20)) page 7
- Inserting the feeding eyelet into its socket (Fig. 21))
- Oiling the machine (p. 8)
- Explaining the row counter (Fig. 42/42a, p. 15)
- Wool winding (Fig. 73, p. 26)
- Yarn threading and adjusting the yarn guide (Fig. 48-54, p. 19-21)
- Explaining the needle scale (Fig. 37, p. 13)
- With 1:1 side of pattern ruler push 15 nds into W. P. on back and front bed (Fig. 29, p. 10). Handle up. (Note: needle must face channel as clearly explained in Fig. 44, p. 16 and Fig. 23, p. 9)
- Needle rule according to Fig. 46, p. 16, i. e. first nd at front left, last nd at right back.
- Placing edge springs on edge nds (Fig. 36, p. 13) with closed latches.
- Explaining the stitch size regulator, N-X lever and dial selector (Figs. 38-40, p. 14).

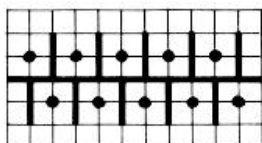


Refer to the indications for basic stitch patterns given on the diagram. Stick on diagram.

2) Practise knitting for BACK (Fig.1)

Cast on for 1:1 rib border, i. e. on both beds put every alternate nd into W. P. (knit 1, purl 1) (see also instruction book, Fig. 76, page 27)

Needle setting:



Handle up
pink strippers
lock is at right

Set lock on $\frac{N}{N}$ St. S approx. 1 1/2,
knit 1 row

Set lock on $\frac{CX}{CX}$ St. S approx. 2 1/2,
knit 2 or 4 rows

Set lock on $\frac{N}{N}$ St. S approx. 2 1/2,
knit 1 row

Lock is at right. Set row counter to 000. Knit 14 rows. Lock is at right.

Change to stocking st on front bed (single bed)

Transfer all sts from back bed to empty nds on front bed, using double decker tool (Fig. 77-79, p. 28).

Knit stocking st

On back bed return all nds to N. P.

Handle down, black strippers.

St. S 4 1/2 to 5, lock set on $\frac{GX}{N}$ (explain free move)

Knit 10 rows (RC 24). Lock is at right.

Unravel 2 rows in stocking st acc. to Fig. 95-96, p. 35). Set row counter 2 rows back (RC 22). Lock stays at right.

Increase 1 st at both ends (on lock side only) (Fig. 83, p. 30)

At right front, put 1 nd into W. P. Knit 1 row.

At left front, put 1 nd into W. P. Knit 1 row. (RC 24)

Knit 8 rows. (RC 32)

Make 2 more increasings as before (RC 52). Lock at right.

At both ends decrease 3 sts (on lock side only) acc. to Fig. 84, p. 30

Set lock on $\frac{N}{N}$, St. S on $\frac{2 1/2}{4 1/2-5}$

At right back put 3 edge nds into W. P. Knit 1 row.

Release the 3 sts on back bed. On front bed cast off the 3 edge sts (Fig. 63-65 and 70, p. 25).

On front and back bed return those 3 nds to N. P.

At left back put 3 edge nds into W. P. Knit 1 row (RC 54).
Lock is at right.

Release the 3 sts on back bed and at front cast off the 3 edge sts.

On front and back bed return those 3 nds to N. P. Set lock on $\frac{GX}{N}$.

At both ends decrease 1 st (Fig. 82, p. 29)

With red single decker tool. At right and left move edge sts 1 nd inwards onto next nds (there will be 2 sts on those nds).

Return empty nds to N. P. Knit 2 rows.

Repeat 2 more times (RC 60)

With black triple decker tool. At right and left move the 3 edge sts 1 nd inwards (there will be 2 sts on the third nd).

Return empty nds to N. P. Knit 2 rows.

Repeat until there are 10 sts.

Casting off

Set lock on $\frac{N}{N}$, St. S $\frac{2\frac{1}{2}}{4\frac{1}{2}-5}$

Black strippers

On back bed put 10 nds into W. P. Knit 1 row.

Release sts on back bed and return empty nds to N. P.

Starting from the right, cast off all sts (Fig. 63-65 and 70, p. 25).

An other method of decreasing several sts and casting off

Single-bed:

Lock is at right. Move edge st on to second nd. Return empty edge nd to R. P. Push nd up so that both sts slip behind the open latch. By hand put yarn into open latch of nd, then push nd down until both sts are knitted. Place the new st thus obtained on to next nd and so on.

Note: When knitting together both sts, make sure that the new st is long enough to obtain an elastic edge.

Double-bed:

First transfer all sts from back bed to front bed, then continue as for single bed.

3) Practise knitting for FRONT (Fig. II) (V-neck)

The front is knitted in the same way as the back. We therefore skip the operations before the armhole beginning.

We start right away with stocking st and automatic cast-on with pushers.

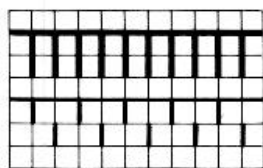
There are 3 basic pusher positions (Fig. 32, p. 11)

- N. P. Neutral Position (within blocking rail)
- R. P. Rest Position (the foot of the pusher is no more within the blocking rail, but resting on it)
- W. P. Working Position (pusher foot is in the upper third of the pusher bed)

Preparing for a cast-on in stocking st with pushers

Needle division:

On front bed put 36 nds into W. P. using straight edge of pattern ruler.



Unlock blocking rail of front bed and move 36 pushers out of the rail (Fig. 33, p. 12)

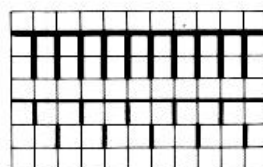
Note: Make sure no pusher is caught in the blocking rail. (Fig. 34, p. 12)

With 1:1 edge of pattern ruler select pushers for 1:1 division, i. e. 1 pusher in R. P. , 1 pusher in W. P. (Fig. 89, p. 32)

Cast-on for stocking st with pushers

Set lock on $\frac{\text{back: GX}}{\text{front: BX}}$

At front press both arrow keys according to Fig. 41, p. 15.



- $\frac{\text{GX}}{\text{BX}} \leftrightarrow$
- handle down
 - lock is at right
 - black strippers
 - St. S 4 1/2 to 5

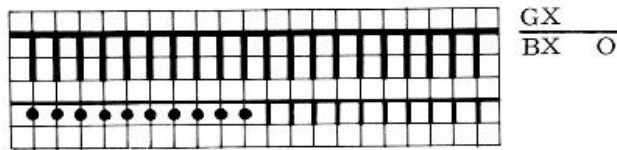
Knit 4 rows, moving lock slowly but steadily across the needles (lock is at right).

At front set N-X lever to N $\frac{(\text{GX})}{(\text{N})}$, press zero key.

Return pushers to N. P. (within blocking rail)

Knit 30 rows (lock is at right)

How to divide work for neck shaping when knitting stocking st
(Fig. 92a, p. 34, section A)



For right half put 18 pushers into W. P.

At right cast off 3 sts (as for BACK).

At left place edge st on to next nd (using red single decker tool).
Knit 2 rows.

At right decrease 1 st, using triple decker tool. Knit 2 rows.

At right decrease 1 st, using triple decker tool. Knit 2 rows.

At left decrease 1 st with single decker tool and at right 1 st
using triple decker tool. Knit 2 rows.

At right decrease 1 st with triple decker tool. Knit 2 rows.

At right decrease 1 st with triple decker tool. Knit 2 rows.

At left decrease 1 st with single decker tool and at right 1 st
using triple decker tool. Knit 2 rows.

And so on until there are 3 sts. Place these sts on centre nd,
break yarn and thread through.

4) Practise knitting for SLEEVE (Fig. III)

Border (Cuff)

With 8 sts on back bed and 8 sts on front bed cast on in 1:1 division as for BACK (red strippers, handle up). Knit 20 rows.

Change to stocking st on front bed (single bed)

Transfer sts from back bed to empty nds on front bed (larger St. S, black strippers, handle down).

Increase at both sides for sleeve shaping

Knit 10 rows.

At both ends increase 1 st. Knit 14 rows.

At both ends increase 1 st. Knit 14 rows.

At both ends increase 1 st. Knit 14 rows.

At both ends increase 1 st. Knit 14 rows.

Decrease at both sides for raglan shaping (sleeve head)

At both ends cast off 3 sts. Knit 4 rows.

Then *decrease 1 st at both ends, knit 2 rows*.

Repeat from * to * until 2 sts remain. Break yarn and thread through remaining 2 sts.

Before starting our "home work" we try to answer the following questions

5) Questionnaire to Chapter I

Q = question A = answer

- 1 Q: Which is the correct position of the nds and handle when knitting with all nds?
A: The nds must be in "nd facing tooth" position, handle down. (Fig. 24, p. 9)
- 2 Q: How many basic positions has the latch needle?
A: Two. N. P. and W. P. (Fig. 29)
- 3 Q: What is the ball of wool supposed to be like and where is the beginning of the wool to insure correct and even knitting?
A: The ball of wool must be soft and bouncy so that the wool runs easily from the centre of the ball. (Fig. 73, p. 26)
- 4 Q: What must we watch before we continue with our knitting, after an interruption?
A: The yarn tension. Pull yarn down before continuing the knitting. (Fig. 54, p. 21)
- 5 Q: How can we tell the correct adjustment of the yarn tensioner?
A: The tension arm is in a horizontal position and moves slowly upwards. (p. 21)
- 6 Q: Which is the needle rule for arranging the nds?
A: Front left = first nd, back right = last nd. (Fig. 46, p. 16)
- 7 Q: On which side of the lock do you decrease?
A: Decreasing sts can be done on either side. Decreasing several sts at a time must always be done on the lock side. (p. 23)

- 8 Q: On which side of the lock do we increase?
A: Increasing 1 st only must be done on the lock side.
Increasing several sts at a time, however, must be done on the side opposite to the lock (p. 23 + 25). This will be explained later on.
- 9 Q: When do we use red, resp. black strippers?
A: Red strippers: for double bed knitting with thin or medium wool. Black strippers: for single bed knitting (stocking st) and tubular.
- 10 Q: What do we do when the lock gets jammed?
A: Remove strippers and feeding eyelet, set lock on $\frac{GX}{GX}$ and move lock carefully to the other side. (p. 18)
- 11 Q: How do we replace a latch needle?
A: If not yet practised, see p. 57, Figs. 122, 122a and 123.

6) Our first home work - knitting a sweater

It concerns a V-neck sweater with raglan sleeves and 1:1 rib borders.

We recommend to use a medium or fine wool for sweaters. It will take about 250 to 300 gr. If we knit according to the instructions we will obtain a sweater to fit a seven or eight year old.

Do not forget yarn threading and adjusting of the yarn guide come first.

The figures on our diagram are marked Fig. I, Fig. II, Fig. III and Fig. V. There is no Fig. IV as this stands for collar (according to the method used for our model books) and this sweater has a neck band and no collar.

Detailed description

Back - Fig. I

Section A: For 1:1 rib border cast on 106 sts and knit 20 rows. Then transfer all sts to front bed for stocking st. Set RC to 000.

Section B: Knit 16 rows straight in stocking st. Then increase 1 st at both ends, every 32nd row. (Totalling to 112 sts and 96 rows in stocking st before armhole shaping.)

Section C: For begin of armhole shaping cast off 3 sts at beginning of next 2 rows.
Then, with triple decker tool, decrease 1 st at both ends, every alternate row, 38 times. Cast off remaining 30 sts.

Front - Fig. II

Section A and B: As back up to neck shaping.

Section C: At right put 56 pushers (for 56 nds) into W. P. Set lock at front on BX O.
At right and left decrease according to diagram:
For neck shaping decrease 1 st every 6th row, 13 times, using red single decker tool.
Raglan shaping as for back (black triple decker tool and every alternate row).
Lastly, cast off remaining 3 sts.

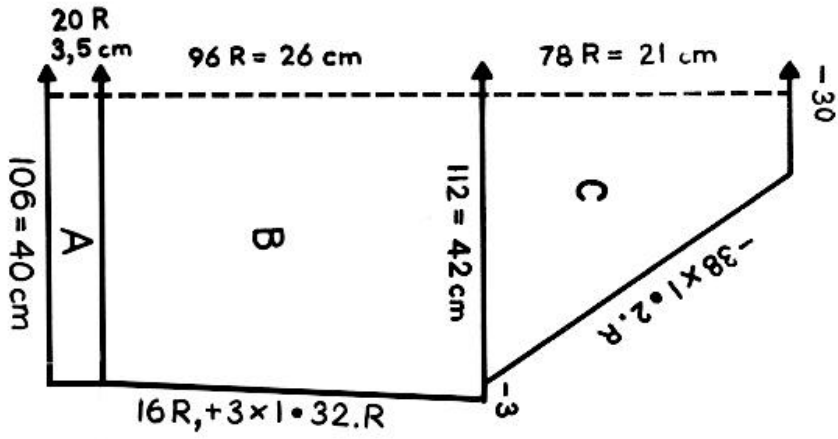


Fig. I

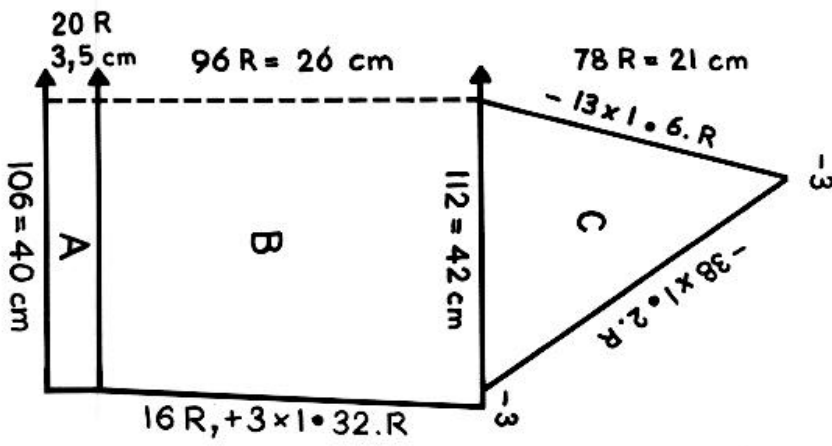


Fig. II

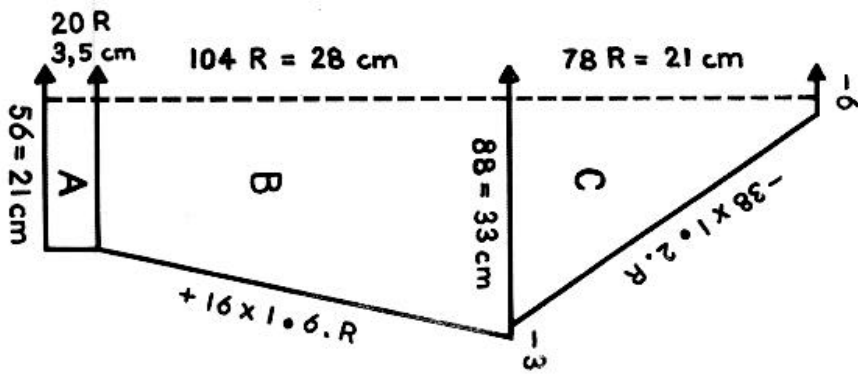


Fig. III

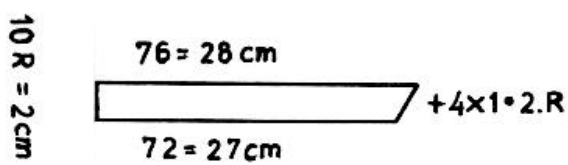


Fig. IV

Sleeve - Fig. III

Section A: For 1:1 rib border cast on 56 sts and knit 20 rows. Set RC to 000.

Transfer all sts to front bed for stocking st.

Section B: At both ends increase 1 st every 6th row. (Totalling to 88 sts and 104 rows.)

Section C: For raglan shaping (sleeve head) cast off 3 sts at beginning of next 2 rows.

Then, with triple decker tool decrease 1 st every alternate row, 38 times. Cast off remaining 6 sts.

Neck band - Fig. V (Knit 2 parts alike, but with reversed shapings.)

Cast on 72 sts and knit 10 rows in 1:1 rib. At one end increase 1 st every alternate row, 4 times. Cast off loosely.

Note:

To find the number of sts necessary for the neck band, we normally measure the neck edge of the sewn up sweater and compare the number of centimetres with the knitted 1:1 rib border of the sweater.

The preceding description, however, already gives the correct number of sts, as we did the calculating for you.

Making up: Press all parts lightly (using a damp cloth). Join side, sleeve and shoulder seams. Join unshaped short edges of neck band (centre back). Sew neck band to neck edge forming a neat point at centre front with the shaped edges.

CHAPTER II

7) Technical terms concerning "double-bed knitting"

- So far, we have only knitted 1:1 rib on both beds, i. e. on both beds with every alternate nd in W. P. , handle up (Fig. 23, p. 9).

Now, that we want to knit over a certain width with all nds in W. P. we have to note the following:

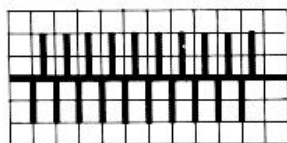
Needle facing tooth, handle down according to Fig. 24, p. 9.

- For certain operations it is recommended to lower the front bed. (Fig. 35, p. 13)
- Get acquainted with the diagram on the lock and the use of the dial selector by reading carefully the text on page 18 of the instruction book.
- Get acquainted with the correct use of the strippers (p. 15).

8) Practise knitting for double-bed work

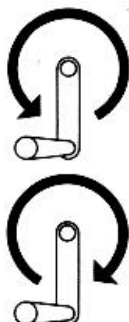
Quick cast-on with racking for K/K (knit/knit = knit 1, purl 1). All nds of both beds are in W. P. (Fig. 55-57, p. 21-22)

Needle division: (30 nds on each bed = 60 sts in W. P.)



- handle down
- pink strippers
- lock is at right

Lock set on $\frac{N}{N}$, St. S approx. $3\frac{1}{2}$



With racking handle make 1 turn to the left, knit 1 row.

With racking handle make 1 turn to the right, knit 1 row.

(Fig. 55-57, p. 21-22)

Lock is at right.

Set row counter to 000. Knit 30 rows (RC 30).

Continue according to page 22 of DUOMATIC instruction book:

<u>Fisherman's rib</u>	30 rows	$\frac{EX}{EX}$	=	RC	60
<u>K/K</u>	10 rows	$\frac{N}{N}$	=	RC	70
<u>Pearls on the front of knitting</u>	20 rows	$\frac{EX}{N}$	=	RC	90
<u>K/K</u>	10 rows	$\frac{N}{N}$	=	RC	100
<u>Pearls on the back of knitting</u>	20 rows	$\frac{N}{EX}$	=	RC	120
<u>K/K</u>	10 rows	$\frac{N}{N}$	=	RC	130

At both ends increase and decrease 2 sts according to Figs. 58-59,
page 23.

At both ends increase and decrease 8 sts according to Figs. 62-69,
page 23.

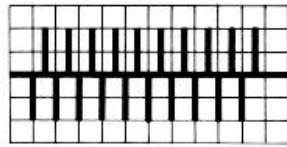
Cast off according to page 25 (bottom).

9) Alternatives for casting on (double-bed knitting)

Casting on with tubular rows for K/K

(p. 27, Figs. 73a-75)

Needle division:



- handle down
- pink strippers
- lock is at right

Set lock on $\frac{N}{N}$, St. S approx. $1\frac{1}{2}$, knit 1 row

Set lock on $\frac{CX}{CX}$, St. S approx. $3\frac{1}{2}$, knit 2 or 4 rows (tubular rows).

Set lock on $\frac{N}{N}$, St. S approx. $3\frac{1}{2}$, knit 1 row.

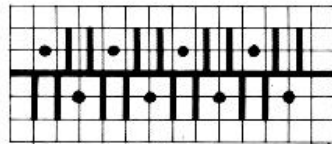
Lock is at right.

Set row counter to 000 and knit 30 rows.

Release knitting.

2:2 cast-on with tubular rows (p. 28/29, Fig. 80)

Needle division:



- handle down
- pink strippers
- lock is at right

Set lock on $\frac{N}{N}$, St. S $1\frac{1}{2}$

With racking handle make 1 complete turn to the left, knit 1 row.

Set lock on $\frac{CX}{CX}$, St. S $3\frac{1}{2}$

Knit 2 or 4 rows (tubular rows).

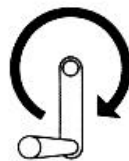
Set lock on $\frac{N}{N}$, St. S $3\frac{1}{2}$

With racking handle make 1 complete turn to the right, knit 1 row.

Lock is at right.

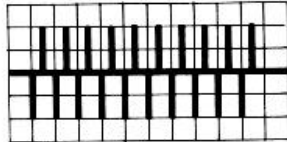
Set row counter to 000. Knit 40 rows.

Release knitting.



The double hem, p. 32 (closed tubular cast-on)

Needle division:



- handle down
- black strippers
- lock is at right

Set lock on $\frac{N}{N}$, St. S 2, knit 1 row

Set lock on $\frac{CX}{CX}$, St. S. 4, knit 40 rows
tubular (RC 41)

Lock is at left.

If we wish to continue with single-bed knitting, transfer all sts to front bed. (Fig. 89, p. 32)

If we wish to continue with double-bed knitting, knit 1 row with lock set on $\frac{N}{N}$ and black strippers, then change to red strippers and continue in K/K or desired pattern.

10) Knitting stitch pattern

Various patterns, fully automatic

Pattern	II	A-1	page 43
Pattern	II	A-5	page 44
Pattern	II	B-1	page 45
Pattern	II	F-1	page 47
Pattern	II	F-2	page 47
Pattern	II	F-3	page 47

Racking patterns

Explanations on this subject: Figs. 97-98, p. 35

Pattern according to Fig. 99, p. 36

Pattern according to Fig. 100, p. 36

Stitch patterns with 2 or more colours

Pattern	II	B-4	page 45
Pattern	II	B-5	page 46 (Fairisle)

11) Buttonhole knitted with contrast yarn

Figs. 71/72, page 26

12) Questionnaire to Chapter II

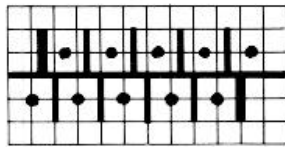
- 1 Q: Which is the correct position of the nds and of the handle when knitting in 1:1 division?
A: 1 nd in N.P. , 1 nd in W.P. The nds are in "needle facing channel" position, handle up.
- 2 Q: On which bed do we knit stocking st?
A: On the front bed.
- 3 Q: Which is the correct position of the nds and of the handle when knitting in 2:2 (rib) division?
A: 2 nds in W.P. , 1 nd in N.P. , handle down.
- 4 Q: Why must the racking handle be either up or down, depending on the stitch pattern?
A: To avoid a collision of the nds.
- 5 Q: What are edge springs for and how do we set the edge springs?
A: Edge springs ensure a faultless knitting of the edge sts which results in a neat edge of the knitting. They must be set on both edge nds with closed latches.
- 6 Q: How many basic position are there for the pushers?
A: Three. N.P Neutral Position, R.P. Rest Position, and W.P. Working Position.
- 7 Q: What must we watch when knitting with pushers?
A: Make sure, no pusher is caught in the blocking rail. (Fig. 34)
- 8 Q: How do we lower the front bed?
A: Pull out the corresponding knob at right of machine.
- 9 Q: Does the front or the back bed move when we turn the racking handle?
A: The back bed. Left turn = back bed moves to the left. Right turn = back bed moves to the right.
- 10 Q: When do we say rows and when tubular rows?
A: Tubular rows = tubular knitting (CX and DX).
Rows = for single-bed and double-bed knitting.

- 11 Q: How do we find out the proper adjustment of the dial selector?
A: By checking the diagram on the lock.
- 12 Q: What is the result of the AX setting of the lock?
A: AX without pushers knits loops. AX with pushers knits normal.
- 13 Q: What is the result of a FX setting of the lock?
A: FX without pushers = Fisherman's rib. FX with pushers = normal knitting, i. e. FX produces Fisherman's rib and K/K in the same row.
- 14 Q: When knitting with lock set on AX: how do we obtain a neat edge?
A: The edge must always work normal.
- 15 Q: What are the 3 keys for?
A: They engage and disengage the movement of the pushers.
- 16 Q: What happens exactly when we press one of the arrow keys?
A: The pushers will change according to the direction of arrow.
- 17 Q: What happens when we press the zero key?
A: It disengages the arrow keys.

CHAPTER III

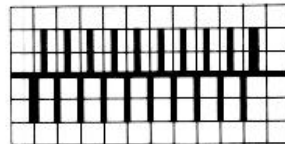
13) Open cast-on for tubular knitting acc. to Fig. 86, p. 30

Needle division:



- handle down
- black strippers
- lock is at right

Set lock on $\frac{CX}{CX}$, St. S approx. 3, knit 2 rows.

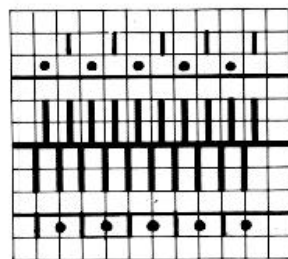


Set lock on $\frac{CX}{CX}$, St. S approx. 5, continue.

14) Open cast-on and knitting half tubular with the use of pushers (acc. to Fig. 87, p. 31)

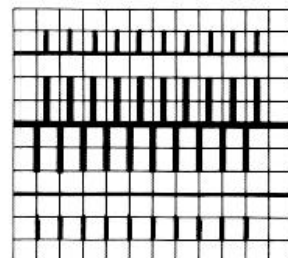
a) Open at right

Needle division:



- handle down
- black strippers
- lock is at right

Set lock on $\frac{BX \rightarrow}{BX \rightarrow}$ St. S approx. 3, knit 2 rows.

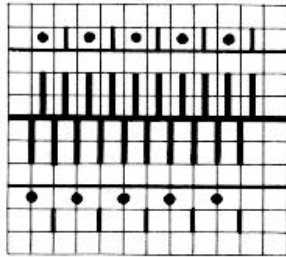


Set lock on $\frac{BX \rightarrow}{BX \rightarrow}$ St. S approx. 5, continue.

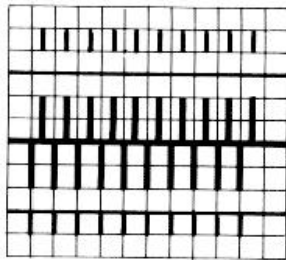
b) Open at left

Needle division:

- handle down
- black strippers
- lock is at left



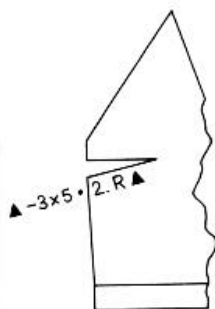
Set lock on $\frac{BX}{BX}$ ← ← St. S approx. 3,
knit 2 rows.



Set lock on $\frac{BX}{BX}$ ← ← St. S approx. 5,
continue.

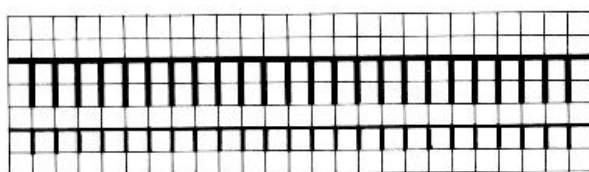
15) Graduations in stocking st with pushers acc. to Figs. 90-92, p. 32-34

a) At left decrease with graduations from outside



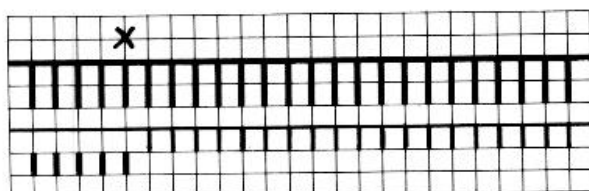
- handle down
- black strippers
- lock is at right

Example: Make 3 graduations over 5 pushers each



$\frac{GX}{BX}$ O

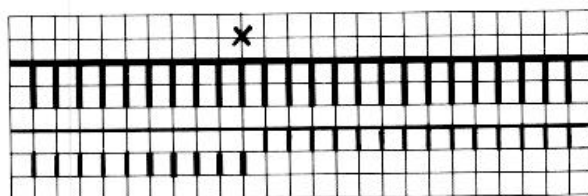
at front, for all working nds put pushers into W. P.



$\frac{GX}{BX}$ O

at left return 5 pushers to R. P.

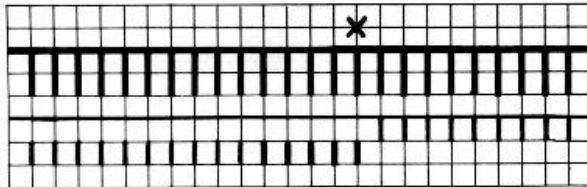
Knit 1 row, twist yarn round nd marked with x (acc. to Fig. 91, p. 33), knit 1 row.



$\frac{GX}{BX}$ O

at left return next 5 pushers to R. P.

Knit 1 row, twist yarn round nd marked with x, knit 1 row.

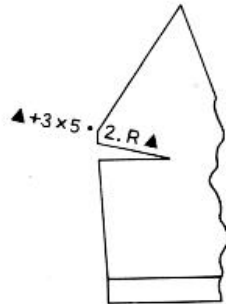


$\frac{GX}{BX \ O}$

at left return next
5 pushers to R. P.

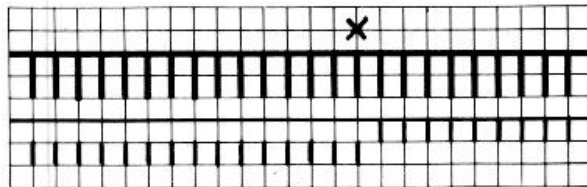
Knit 1 row, twist yarn round nd marked with x. Knit 1 row.
Lock is at right. Return all nds within blocking rail. Set
lock on $\frac{GX}{N}$. Continue knitting.

b) At left increase with graduations from inside



- handle down
- black strippers
- lock is at right

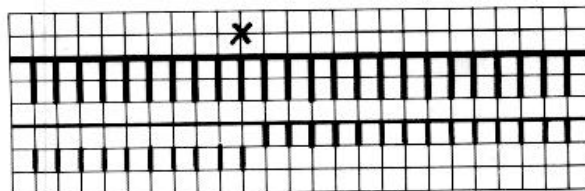
Example: Make 3 graduations over 5 pushers each.



$\frac{GX}{BX \ O}$

at left return 15
pushers to R. P. ,
leaving remaining
pushers in W. P.

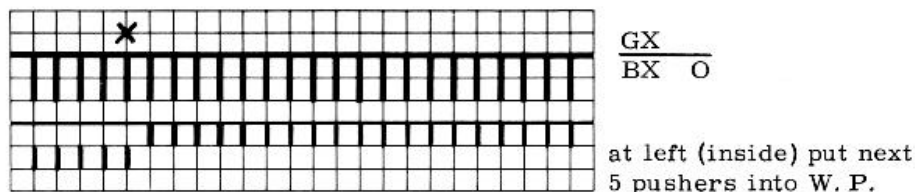
Knit 1 row, twist yarn round nd marked with x (acc. to Fig. 91,
p. 33). Knit 1 row.



$\frac{GX}{BX \ O}$

at left (inside) put
5 pushers into W. P.

Knit 1 row, twist yarn round nd marked with x.
Knit 1 row.



Knit 1 row, twist yarn round nd marked with x.
Knit 1 row, lock is at right.

On front bed return all pushers within blocking rail.
Set lock on $\frac{GX}{N}$ and continue knitting.

Graduations on the right side are worked in the same way, putting pushers at right either in or out of work, with lock at left.

For graduations at both sides procede as follows: On lock side twist yarn round nd marked with x and, at the same time, on opposite side to lock select pushers for graduations.

- 16) If desired, knit a sock according to Figs. 101-112, p. 37-41, but a smaller size (indications below)

Sock continental size 35 (English size approx. 3 1/2 to 4) to fit a 10 year old

Border: Cast on 56 sts in 1:1 division. With St. S 3 (approx.) knit 44 rows.

Leg: Transfer sts from front bed to empty nds on back bed. With St. S 5 and black strippers knit 2 rows. Set RC to 000. At right (on lock side) unravel 14 sts and, on both ends, transfer sts for tubular (onto front bed). Cross the two centre sts at front. Knit 47 rows tubular with lock on $\frac{CX}{CX}$ (RC 47). Set RC to 000.

Heel: Knit until 10 pushers remain in the centre. Set RC to 000.

Foot: Knit 112 rows tubular with lock set on $\frac{CX}{CX}$ (RC 112).

Toe: With yellow tool decrease every RC 4, 6 times. Then decrease every RC 2 until 4 sts on each bed remain. Break yarn, thread through remaining 8 sts draw up and fasten off.

- 17) The use of the PASSAP chart, pages 53/54 of the DUOMATIC instruction book or pages 11 to 13 of the "ABC of Perfect Knitting"

Calculating the number of sts and rows with the help of the PASSAP chart

(First of all, note the lock setting)

Measurements of the test square:

100 sts = 35 cm 100 rows = 20 cm

- a) How many sts do you need to obtain a width of 55 cm ?

Measurement required cm	Table for test squares of 100 sts and 100 rows											
	Measurement obtained						Measurement obtained					
	30	30,5	31	31,5	32	32,5	33	33,5	34	34,5	35	35,5
0,5	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2	1-2
1	3-4	3-4	3-4	3-4	3	3	3	3	2-3	2-3	2-3	2-3
2	7	7	6	6	6	6	6	6	6	6	6	6
3	10	10	10	10	9	9	9	9	9	9	9	8
4	13	13	13	13	13	12	12	12	12	12	11	11
5	17	16	16	16	16	15	15	15	14	14	14	14
6	20	20	19	19	19	18	18	18	17	17	17	17
7	23	23	23	22	22	22	21	21	21	20	20	20
8	27	26	26	25	25	25	24	24	24	23	23	23
9	30	30	29	29	28	28	27	27	26	26	26	25
10	33	33	32	32	31	31	30	30	29	29	29	28
20	67	66	65	64	63	62	61	60	59	58	57	56
30	100	98	97	95	94	92	91	90	88	87	86	85
40	133	131	129	127	125	123	121	119	118	116	114	113
50	167	164	161	159	156	154	151	149	147	145	143	141
60	200	197	194	191	188	185	181	179	176	174	171	169
70	233	230	226	222	219	215	212	209	206	203	200	197
80	267	262	258	254	250	246	242	239	235	232	229	225
90	300	295	290	286	281	277	273	269	265	261	257	254

At the top of the conversion chart, look for figure 35. Follow this column downwards until you are level with figure 50 at the extreme left. At the point where the vertical and horizontal lines meet, there is figure 143 (therefore 143 sts). However, since we want the number of sts for 55 cm, we again have to go upwards in the vertical column 35 until we are level with figure 5 at the extreme left. At the point where the two lines meet, we now find the figure 14 (therefore 14 sts). Consequently, 55 cm correspond to (143 + 14 sts) 157 sts. However, if possible, we always work with an even number of sts, we round up to 158 sts.

b) How many rows do you need to obtain a length of 33 cm ?

Measurement required **Table for test squares of 100 sts and 100** Measurement obtained

cm	20	20,5	21	21,5	22	22,5	23	23,5	24	24,5	25	25,5	
0,5	2-3	2-3	2-3	2-3	2-3	2	2	2	2	2	2	1-2	
1	5	4-5	4-5	4-5	4-5	4-5	4-5	4	4	4	4	4	
2	10	10	10	9	9	9	9	9	8	8	8	8	
3	15	15	14	14	14	13	13	13	13	12	12	12	
4	20	20	19	19	18	18	17	17	17	16	16	16	
5	25	24	24	23	23	22	22	21	21	20	20	20	
6	30	29	29	28	27	27	26	26	25	24	24	24	
7	35	34	33	33	32	31	30	30	29	29	28	27	
8	40	39	38	37	36	36	35	34	33	33	32	31	
9	45	44	43	42	41	40	39	38	38	37	36	35	
10	50	49	48	47	45	44	43	43	42	41	40	39	
20	100	98	95	93	91	89	87	85	83	82	80	78	
30	150	146	143	140	136	133	130	128	125	122	120	118	
40	200	195	190	186	182	178	174	170	167	163	160	157	
50	250	244	238	233	227	222	217	213	208	204	200	196	
60	300	293	286	279	273	267	261	255	250	245	240	235	
70	350	341	333	326	318	311	304	298	292	286	280	274	
80							356	348	340	333	327	320	313
90													353

When converting centimetres into rows, the procedure is exactly the same:

Column 20

Junction point at height of 30 cm = 150 rows

Junction point at height of 3 cm = 15 rows

33 cm = 165 rows

Round up to 166 rows

Please note: Column of sts and column of rows never correspond with one another.

18) Questionnaire to Chapter III

- 1 Q: Around which nd do we twist the yarn, when making a graduation and why?
A: Twist the yarn around the last nd with pusher in R. P. to avoid a hole in the knitting.
- 2 Q: When do we knit with lock set on BX?
A: When certain nds should not knit.
- 3 Q: Which nds knit and which nds do not knit when lock is set on BX?
A: Nds with pushers in R. P. do not knit, nds with pushers in W. P. knit.
- 4 Q: Why must we cross the 2 centre sts when transferring sts to front bed for tubular?
A: To avoid a hole in the knitting when changing from ribbed border to stocking st.
- 5 Q: Why do we knit the heel with lock set on $\frac{GX}{BX}$?
A: GX on back bed: because we do not knit on back bed.
BX on front bed: because we only knit over certain nds (not over all nds) on front bed.
- 6 Q: Why must we twist the yarn round the nds when knitting the heel?
A: To avoid a hole in the knitting.
- 7 Q: When finishing the toe, why do we first decrease every 4th row, then every second row?
A: To obtain a nicely shaped toe.