Knitwear Guide

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Intro

Knit structures

Knitted structure consists of interconnected loops which usually results in a very stretchy fabric. This method requires more flexible conductive yarns than any other structures because the yarn is highly curved to form a loop.

Fig: Knitting is the method of creating fabric by transforming continuous strands of yarn into a series of interlocking loops.
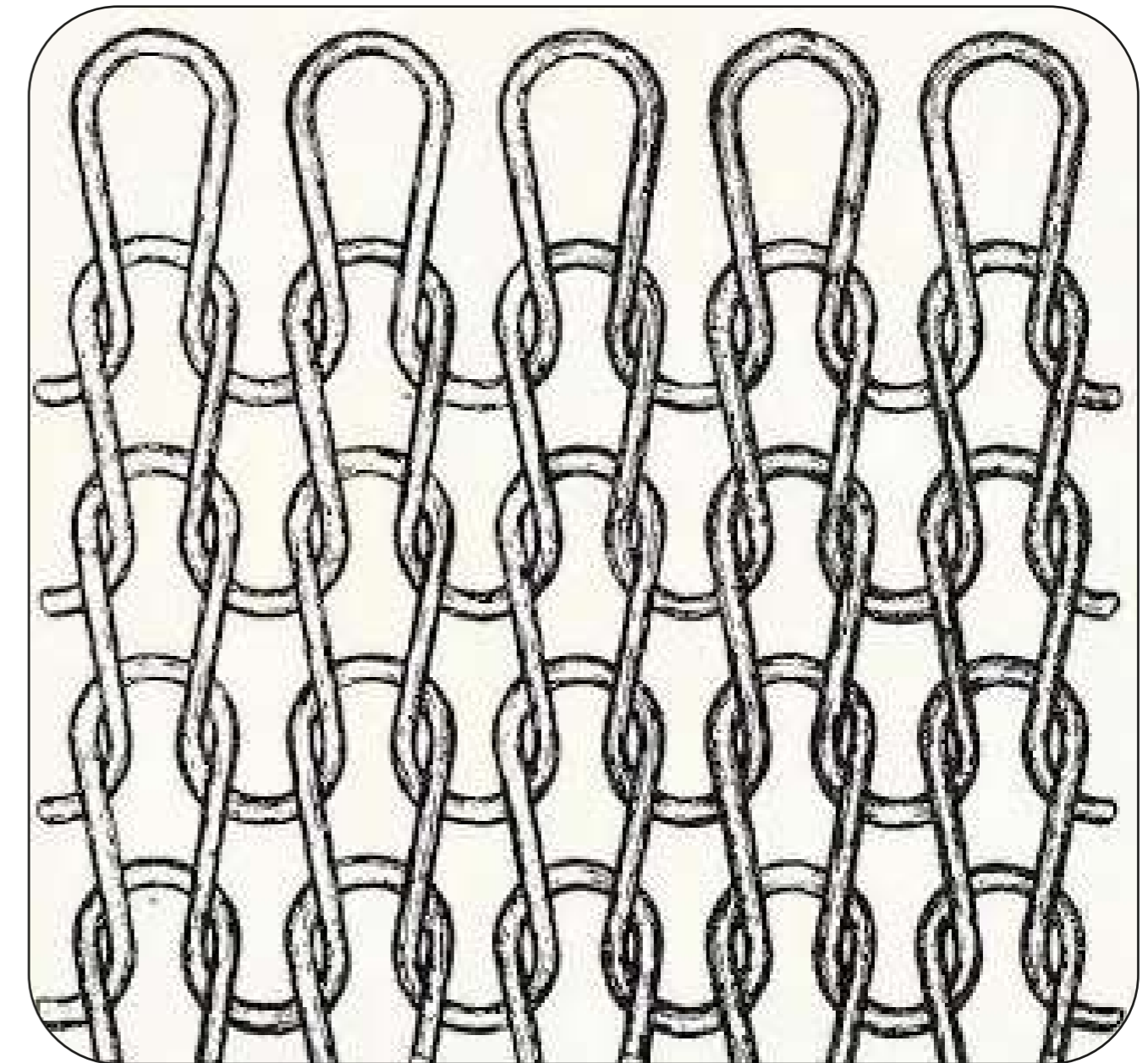
Fig: Knitting structure

Knitting Methods

Knitting is the method of creating fabric by trans-forming continuous strands of yarn into a series of interlocking loops. There are 3 knitting methods for production:

Cut & Sew: The knitting machine produces larger panels of fabric, from which the pattern gets cut and the pieces assembled with a sewing machine.

Fully fashioned: The knitting machine produces panels in the correct shape, reducing cutting waste. The parts then get linked by hand, resulting in amore premium product.

3D knitting: This knitting machine is a more advanced version of a flat knitting machine. The machine creates the entire garment in one seamless piece.

Fig: Flat knitting machine (fully fashioned)

At Labwear, we use the fully fashioned knitting method.
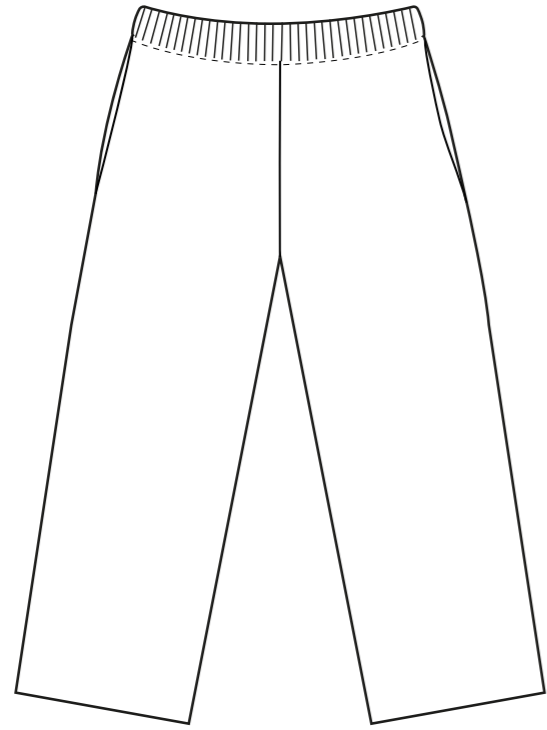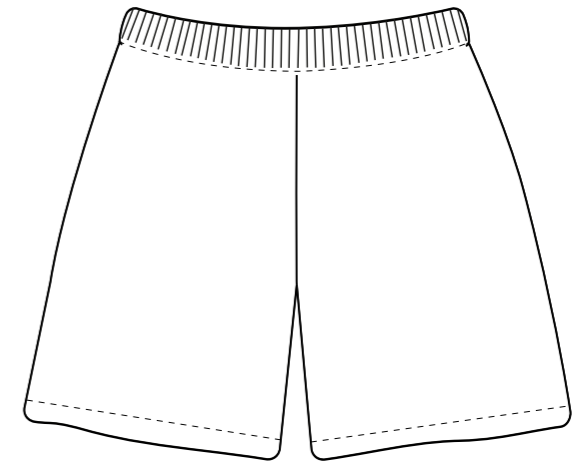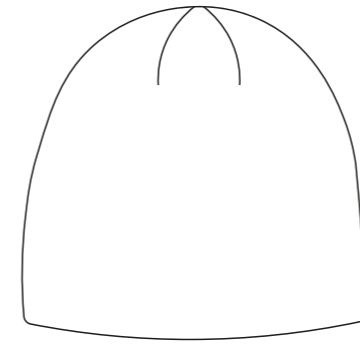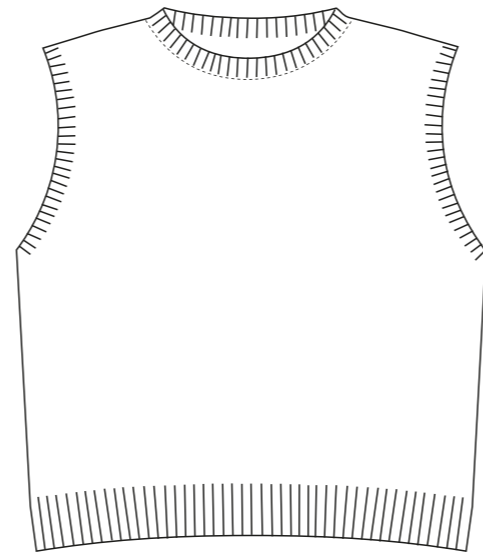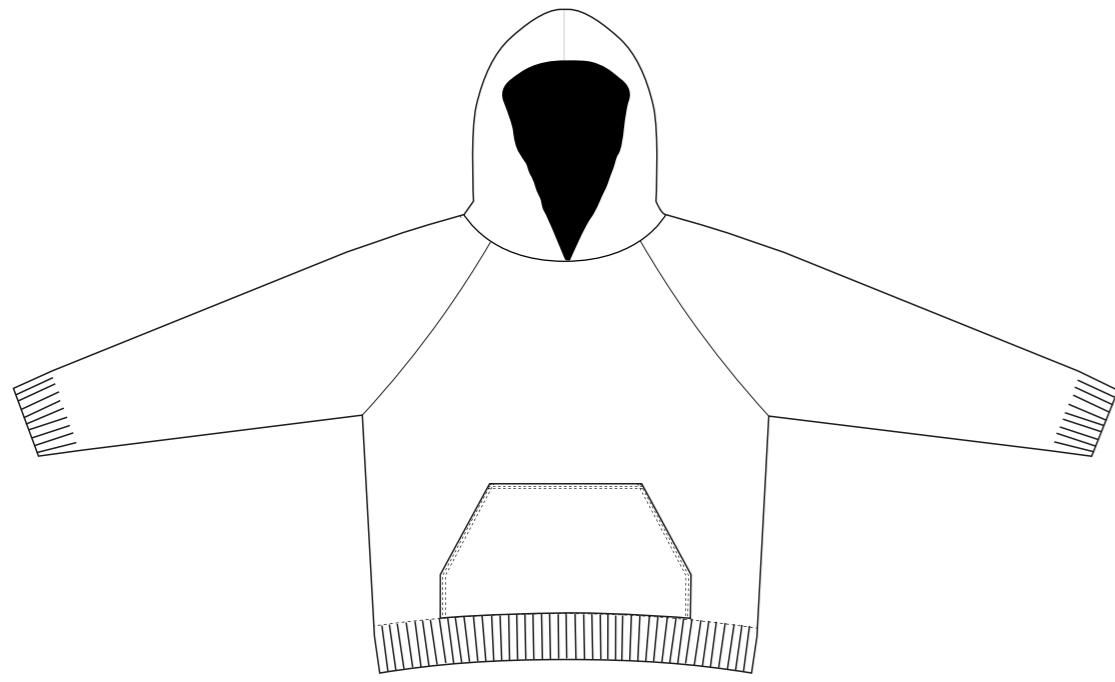
How to start
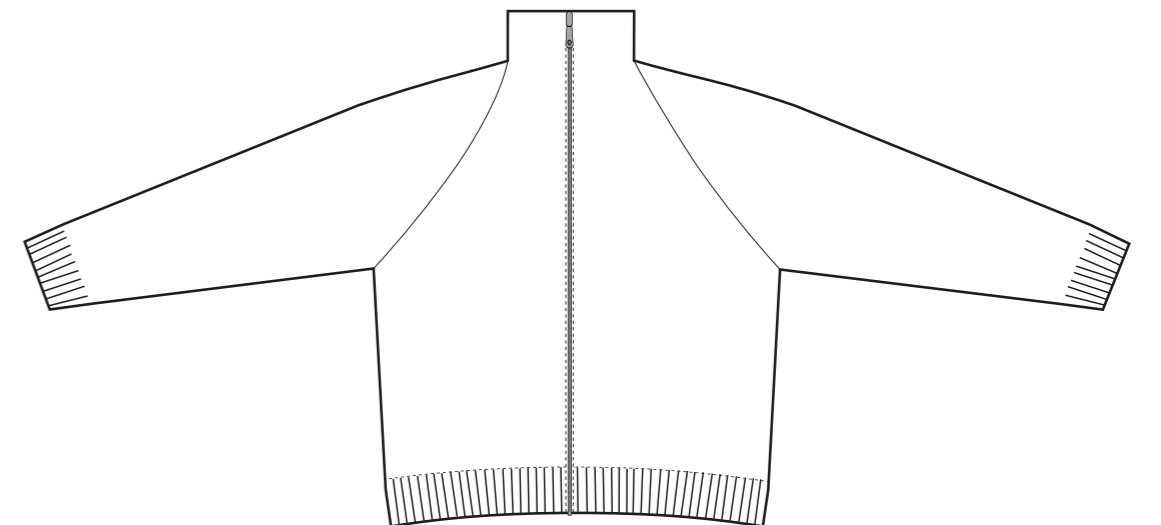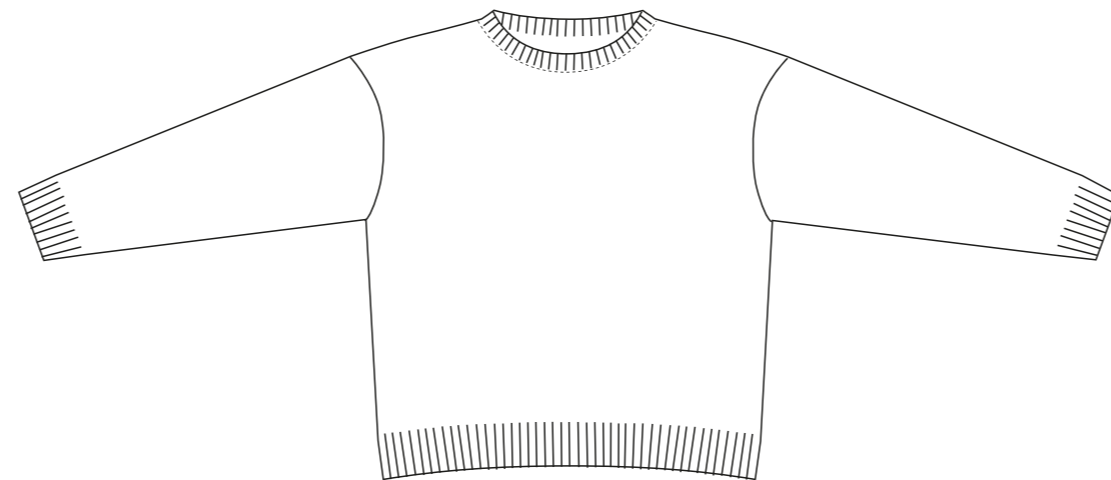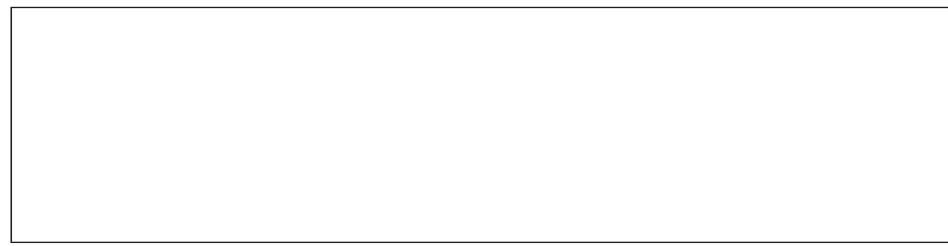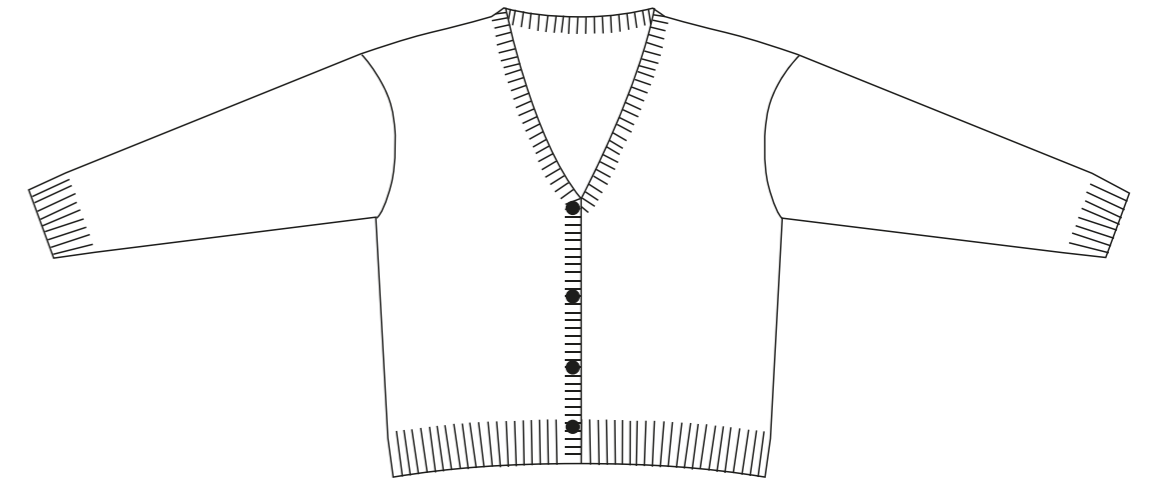
Design process on Labwear OS

* to access the Knitwear Program on labwear OS you need a PLUS subscription

Step 1: Develop your own fit or choose predeveloped measurements

(Fill in the size chart or upload patterns)

Step 2: Choose a yarn composition and gauge size

100% Cotton [Gauge 7 or 12],
100% Merino [Gauge 12],
30% Alpaca 30% Nylon 40& Acrylic [Gauge 7]

Step 3: Choose a Yarn colour/dye

Write the according colour code from the colourcard or the TCX code for dyes into „CUSTOM COLOUR"

Step 4: Choose a label option

(Polyester, Canvas, Woven)

Step 5: Choose customizations

(Jacquard, Embroidery, Patch)

Step 6: Choose a knit structure

(Jersey, Rib, Jacquard Interlock, Vanisé Rib)

Step 7: Choose endings for your knit

(Neck, Cuffs, Hems)

If you have specific wishes, use the comment boxes and upload as many refrence pictures as possible.

Knitting structures

Jersey
Rib Stitch
Jacquard interlock
Vanise rib

Jersey

Jersey is a type of knitwear made with a weft knitting technique using two sets of needles, typically based on a jacquard, rib or interlock structure. This is the standard technique in knitwear.

Fig: Single Layer Jersey
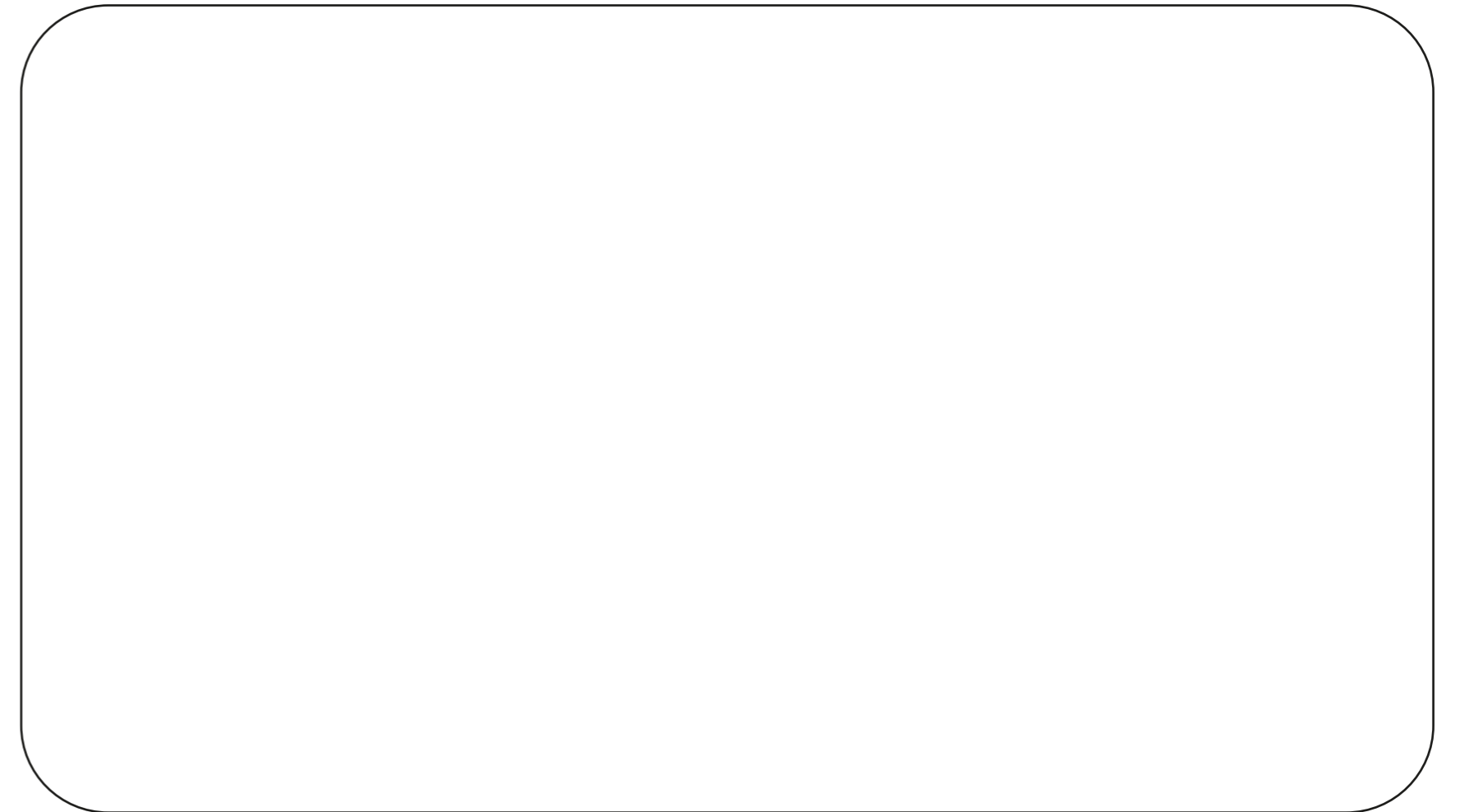
Fig: Double Layer Jersey

Rib

Rib knit is a type of knitting pattern that creates a stretchy textured fabric. It is characterized by vertical lines, known as ribs, which are created by alternating knit and purl stitches. In LabwearOS, you'll be able to select your preferred rib type. (1x1, 2x2, 3x3 etc.)

1x1   2x2   4x4
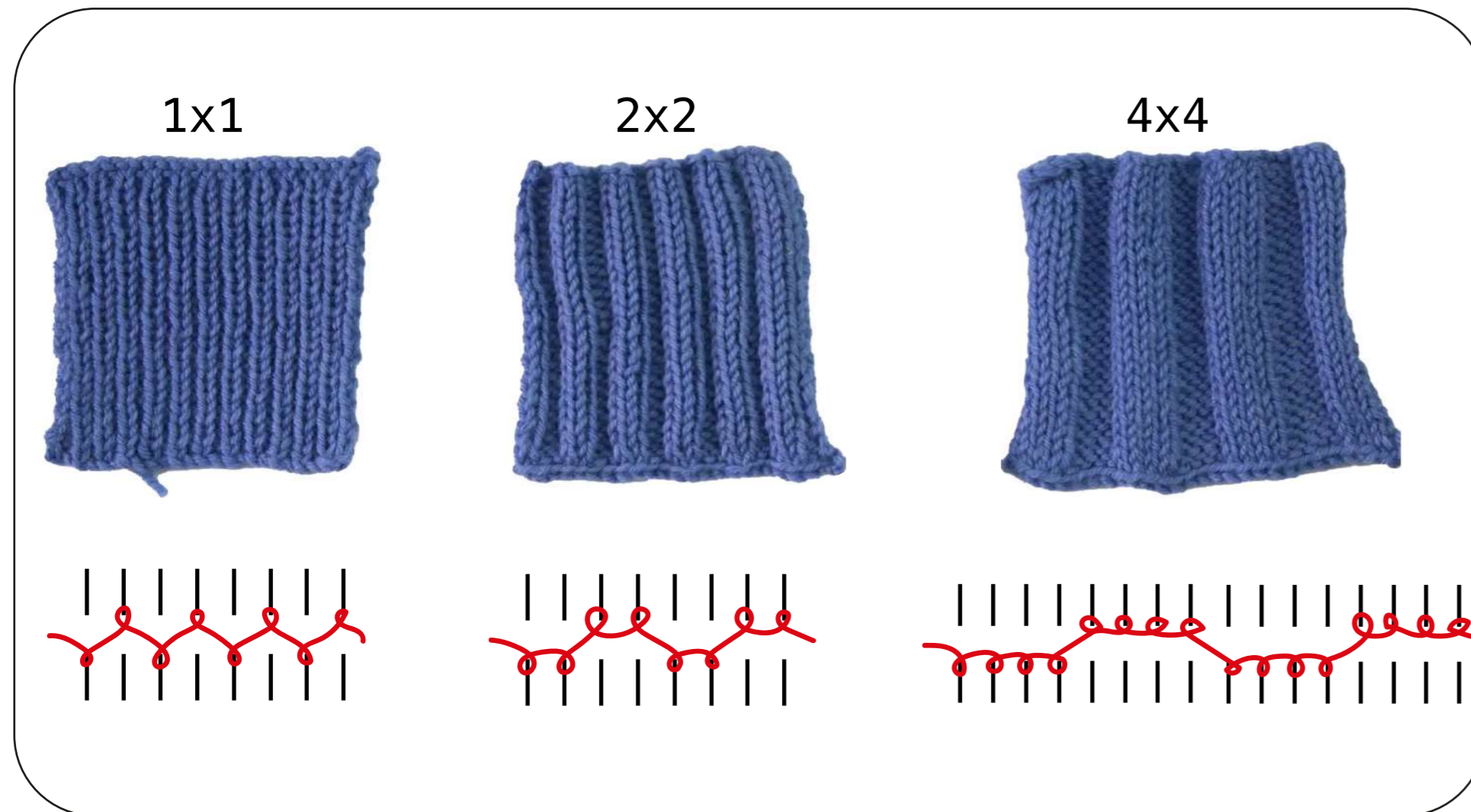
Fig: Rib illustration

Fig: Rib examples

Jacquard interlock

Jacquard interlock is a method that combines the principles of jacquard knitting and interlock knitting in a double-layered structure. This double-layered structure creates an even backside of the jacquard design.

Fig: Jacquard interlock frontside
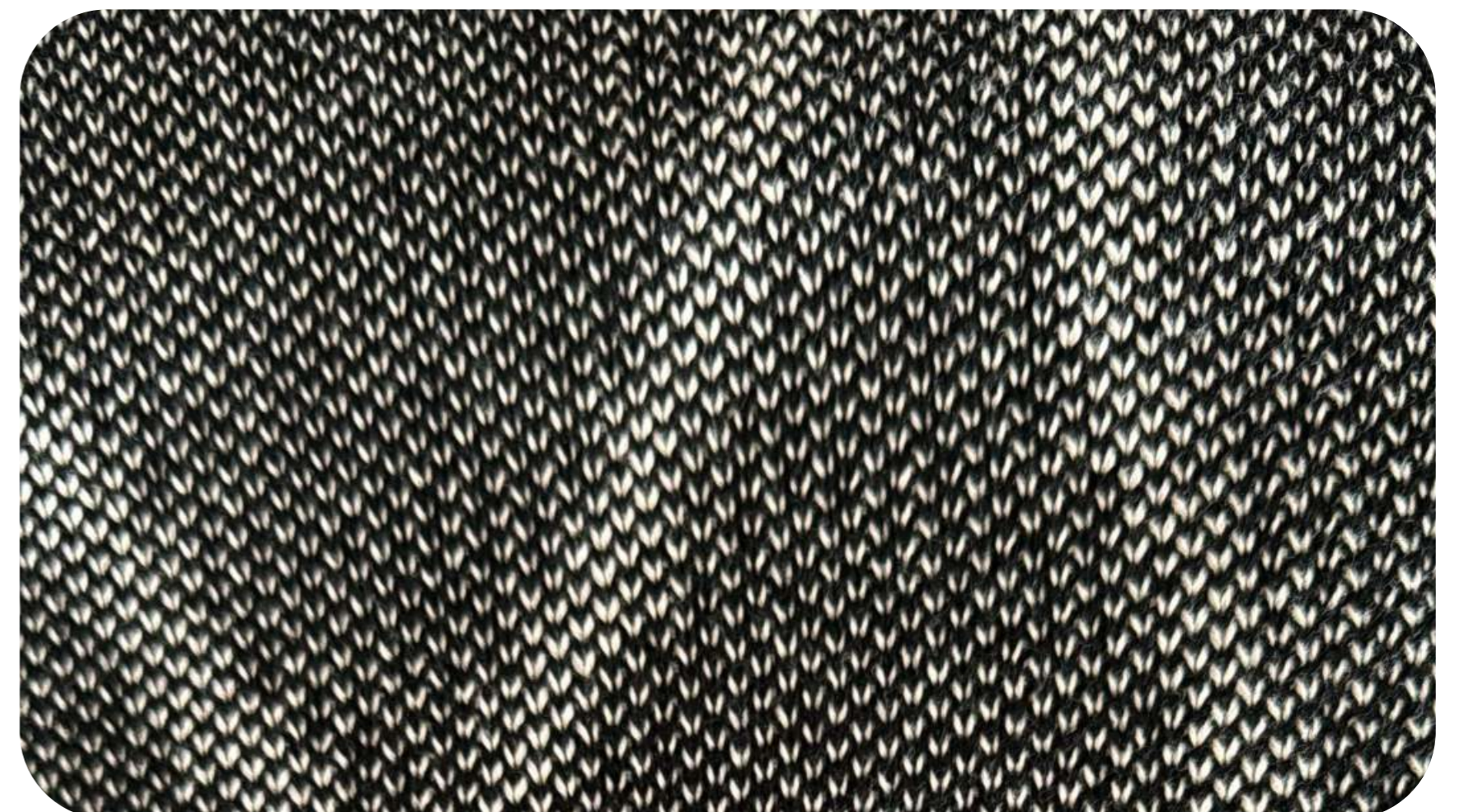
Fig: Jacquard interlock backside

Vanisé rib

Vanisé knit is a double-sided fabric similar to rib fabric, but the yarns used on the front and back are in different colours to create a unique look.

Fig: Vanisé 1

Fig: Vanisé 2

Endings

1x1 crew neck

1x1 rib cuff

1x1 hem

2x2 crew neck

2x2 rib cuff

2x2 hem

mock turtleneck

rolled edge cuff

rolled edge hem

Yarn

Composition
Colour
Gauge

Yarn composition

There are three yarn composition to choose from.

30% Alpaca 30% Nylon 40% Acrylic

100% Cotton

100% Merino
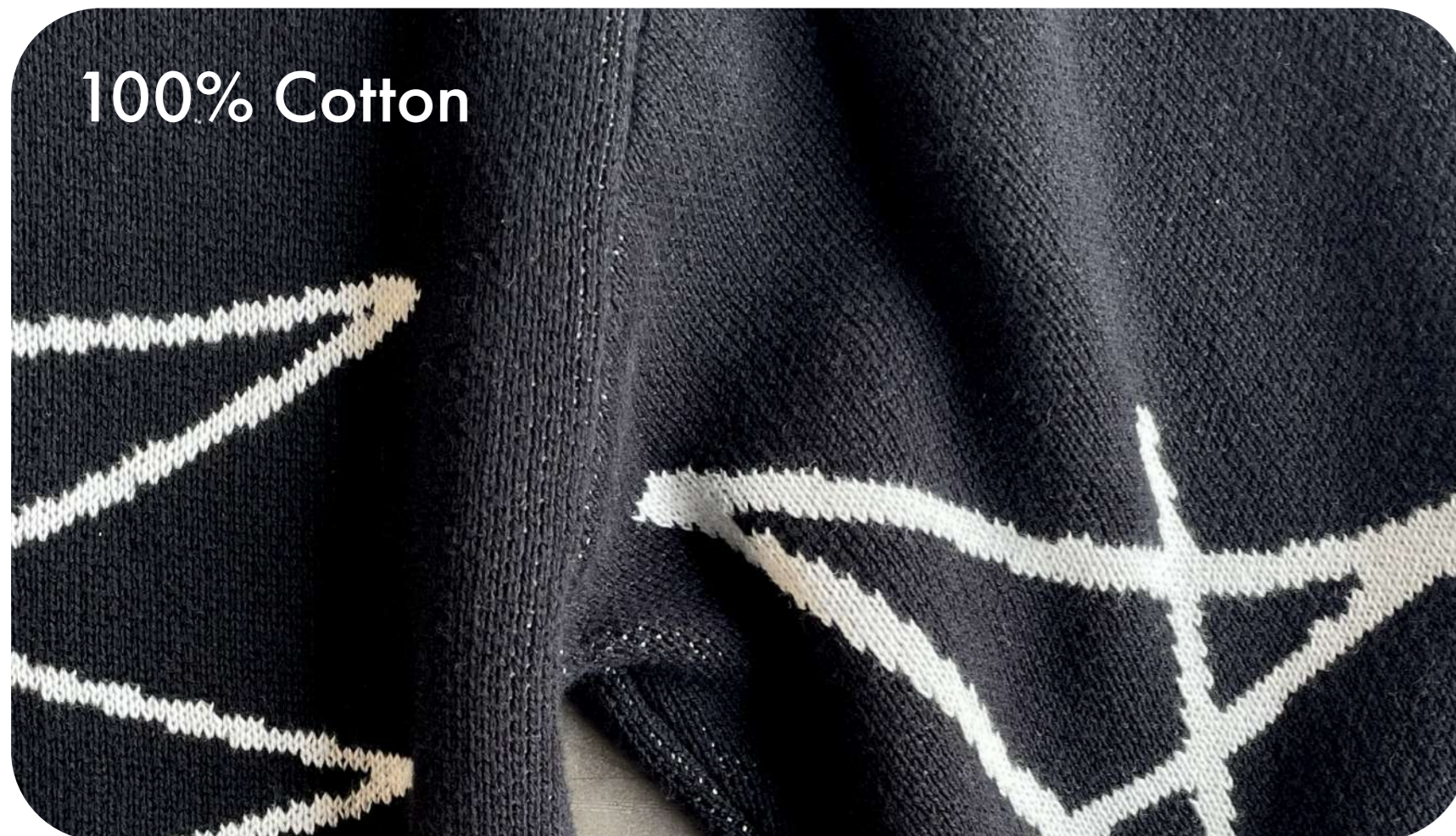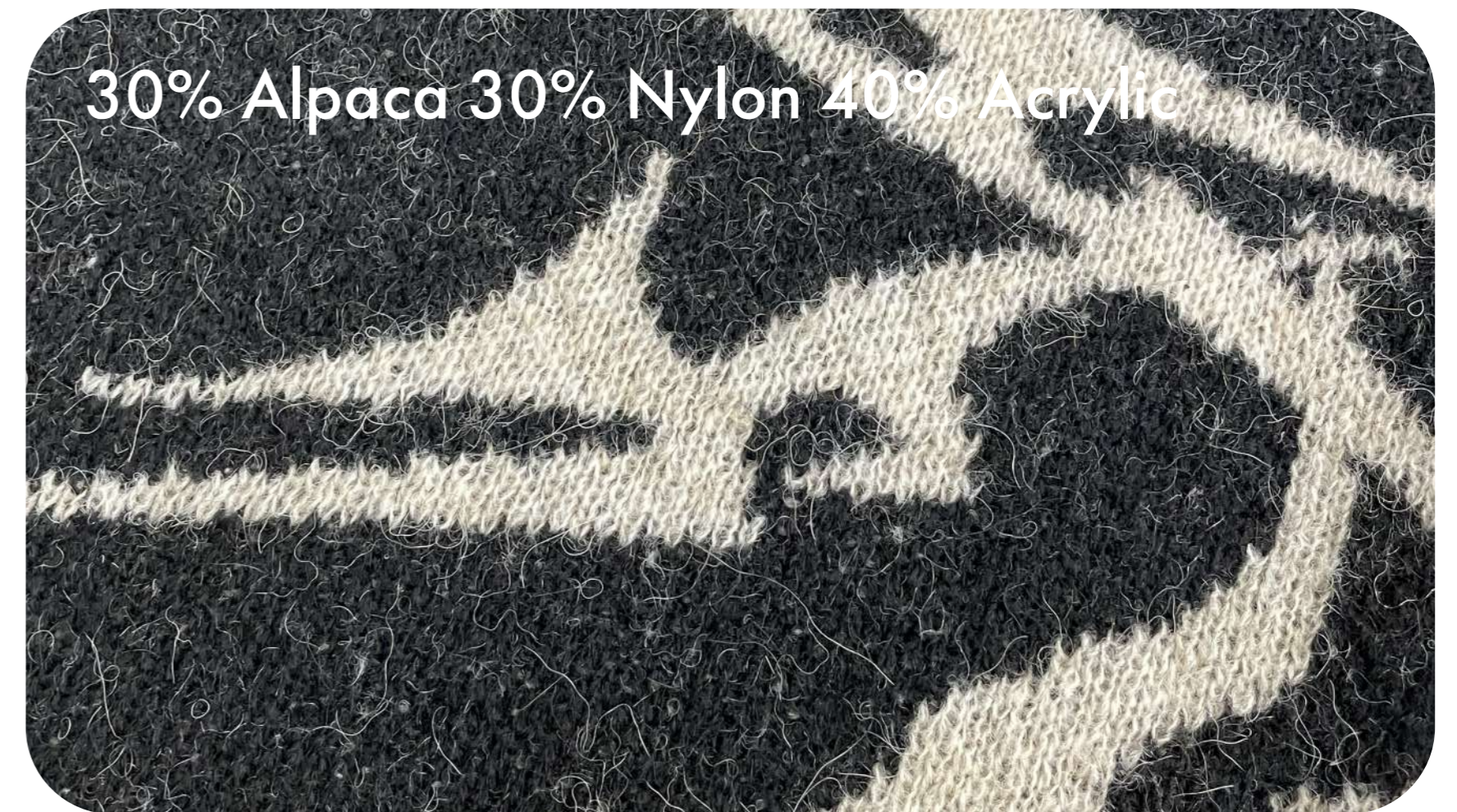
Yarn colour

For all yarns, please select colors from the colour cards provided below.

Special note for Cotton:
When selecting a cotton yarn, you have two options: choose a color from the colorcard or opt for vegetable dyeing. If you prefer vegetable dyeing, please provide a specific Pantone TCX code for the desired color(colour on actual garment may vary).

Fig: vegetable dyed

100% Cotton

100% Cotton	100% Cotton	100% Cotton	100% Cotton
C 907	C 5272	C 411	C 3599
C 3852	C 1111	C 3319	C 6452
C 3850	C 5452	C 412	C 17558
C 6742	C 3480	C 7085	C 5556
C 6055	C 1119	C 9346	C 5574
C 4719	C 4737	C 3573	C 7652
C 3920	C 4192	C 10666	C 5450
C 3369	C 6117	C 10196	C 5695
C 5628	C 9715	C 10071	C 5565

100% Cotton	100% Cotton	100% Cotton	100% Cotton
C 5274	C 3080	C 5229	C 5966
C 1049	C 4488	C 4718	C 4747
C 1001	C 3582	C 3491	C 6016
C 5504	C 3998	C 1120	C 5915
C 4291	C 5098	C 5472	C 4054
C 3302	C 5069	C 013	C 16104
C 4505	C 4194	C 4439	C 5219
C 4843	C 5714	C 5351	C 6033
C 7254	C 4661	C 5419	C 15489

100% Cotton	100% Cotton	100% Cotton	100% Cotton
C 7963	C 6263	C 4681	C 8658
C 3990	C 6704	C 4114	C 6922
C 4921	C 7195	C 5039	C 3163
C 3980	C 5273	C 1141	C 5621
C 6099	C 4637	C 4132	C 5961
C 4983	C 3743	C 4632	C 1074
C 5525	C 7003	C 3089	C 5804
C 7173	C 7828	C 7009	C 3083
C 8177	C 6491	C 6369	C 5959

100% Cotton

100% Cotton	100% Cotton	100% Cotton	100% Cotton
C 5113	C 5198	C 5040	C 4848
C 11A12	C 5178	C 1169	C 5651
C 4778	C 1243	C 6776	C 014
C 6175	C 1072	C 4328	C 084
C 6782	C 5520	C 3293	C 007
C 7088	C 3223	C 4363	C 056
C 4796	C 4142	C 4638	C 1056
C 4570	C 7876	C 3684	C 5239
C 3312	C 5883	C 012	C 4060

100% Cotton	100% Cotton	100% Cotton	100% Cotton
C 001	C 835	C 5223	C 5535
C 2000	C 3460	C 4196	C 3838
C 5775	C 3100	C 10082	C 1009
C 4840	C 3812	C 6166	C 10639
C 3996	C 4931	C 3514	C 8837
C 3583	C 7918	C 5233	C 3813
C 1052	C 5620	C 4525	C 10638
C 059	C 3562	C 1145	C 1011
C 4207	C 4437	C 9424	BK 380/5685

Cotton Melange	Cotton Melange	Cotton Melange	Cotton Melange
MC 1804	MC 1702	MC 1616	MCB 1617
MC 1808	MC 1706	MC 1626	MCB 1627
MC 1830	MC 1712	MC 1618	MCB 1619
MC 1872	MC 1726	MC 1620	MC 2480
MC 1880	MC 1754	MC 1633	MC 1602
MC 1894	MC 1788	MC 1623	MC 1690

30% Alpaca 30% Nylon 40% Acrylic

Panel 1 (left):
- AL1093
- AL1112
- AL1109
- AL1108
- AL1197 Ⓕ
- AL1153
- AL1172
- AL1082

- AL925 Ⓕ
- AL1182
- AL1134
- AL1135
- AL1145
- AL1189 Ⓕ
- AL1128
- AL944

- AL1107
- AL1136
- AL1183 Ⓕ
- AL1129
- AL1148
- AL919
- AL1137
- AL617

Panel 2 (center):
- AL1096
- AL1139
- AL1092
- AL1173
- AL1169
- AL918
- AL1188
- AL960

- AL1138
- AL1111
- AL1194
- AL1126
- AL945
- AL1140
- AL1175
- AL1147

- AL1185
- AL1095
- AL1104
- AL1133
- AL1124
- AL1146
- AL1199
- AL613
- AL920

Panel 3 (right):
- AL912/B
- AL1190
- AL1081/B
- AL90
- AL950
- AL984
- AL915

- AL1090/B
- AL1179
- AL1163
- AL1158
- AL900
- AL906
- AL947
- AL922

- AL1195 Ⓕ
- AL1166
- AL1193
- AL1167
- AL1144
- AL657
- AL1164
- AL1168

100% Merino

Card 1 (left):

10001 ●■▲◆ /ws AGRIGENTO	13701 ● /ws PESCATE	14615 LEVICO
12233 ●■▲◆ /ws MACERATA	13700 /ws PEREGO	14724 /ws PISTICCI
10009 ●▲ /ws TAORMINA	14723 /ws BESSOLO	22066 NULE
14194 /ws NOVATE	22015 /ws GISSI	22063 BREME
11000 ● /ws WHITE FOR PRINTING	EXTRAMELANGE 20964 ● /ws BICCARI	20981 POFI

Card 2 (middle):

22008 /ws GROSSO	EXTRAMELANGE 20987 GIANO	20982 GUARCINO
EXTRAMELANGE 20741 /ws GRAFFA	20983 GONZAGA	20742 GRATA
EXTRAMELANGE 20746 /ws GRETO	EXTRAMELANGE 22055 /ws MULAZZO	EXTRAMELANGE 20206 ●■▲ /ws ARCORE
EXTRAMELANGE 20571 ● ALBA	EXTRAMELANGE 22009 ● GIVO	EXTRAMELANGE 20740 /ws ANSA
EXTRAMELANGE 20205 ●■◆ ALBENGA	14351 /ws FENEGRÓ	20918 AFFILE

Card 3 (right):

20631 ● ANZIO	14349 /ws GIUSSAGO	22074 PADULI
EXTRAMELANGE 20739 ●■◆ /ws GRADINO	14612 /ws TOSCHIAN	22032 SARROCH
20214 ● ARONA	14725 /ws SANZIRRI	20965 CARPINO
20897 ● ANNICCO	14726 /ws GANACETO	20944 CASSINE
10008 ●■▲◆ /ws ROVIGO	14727 /ws GARINO	14728 /ws TERRES

100% Merino

14729 nws TEZZE	19034 nws GANDINI	22020 ATESSA
EXTRAMELANGE 20217 ● nws BOBOLI	19022 nws BOSSICO	20768 CAMED
20606 ●■ nws BORMIO	19046 nws GHIGNOLO	20693 ● ■ nws TESERO
19053 ● nws MAPELLO	20884 nws MANCIANO	22022 CALDARO
20800 ● MOLOC	EXTRAMELANGE 20604 nws CORTINA	20792 ● CANUTO

22073 ● BORNAGO	14488 nws SCAFATI	14644 nws ARSIÉ
1461B nws CASTELLAR	14730 nws GIULFO	19068 nws ARMIO
14202 nws CIVO	14731 nws ORRIA	14524 nws ZAMBRONE
14562 nws CELLOLE	14468 nws OTTAVIANO	22023 ARDESIO
14563 nws TREISO	14732 nws ARIELLI	14574 nws FIASTRA

14734 nws OSASIO	22047 CAGLI	FLUO 14473 nws PRATA
19095 ● nws RANICA	14673 nws RIVELLO	14446 nws BESANO
13973 nws ROBILANTE	19105 ●■ nws BARRIO	22075 VIRCO
19246 nws RONCOLA	19107 ●■▲ nws BREMBO	19049 nws FAULÉ
19620 ● nws BORGARE	20609 ● MAROSTICA	19004 nws VERTOVA

100% Merino

22076 nws RACALMUTO	14736 nws CAMPORA	14675 LOREO
14735 nws FIESSO	14621 nws BIANZANO	EXTRAMELANGE 22046 ● JELSI
14646 nws FICULLE	14737 nws RIGOLLO	14741 nws VESTEA
VIBRANT 14672 nws FICARRA	14738 nws FRASSA	14742 PIANORO
VIBRANT 13907 nws FUMANE	14739 nws CALIMERA	19063 CHIURO

OPTICAL 14532 nws ROLLO	OPTICAL 14534 nws CANTIANO	22059 ACQUEDOLCI
14627 nws LUNGRO	12496 ● nws FENIS	14636 nws MISINTO
14743 nws VELZO	14744 nws ACILIA	19067 ANSEDONIA
14600 nws PRELAZ	14745 nws CASTEGGIO	14527 nws MIRADOLO
EXTRAMELANGE 20658 nws LIVIGNO	14335 nws LEONFORTE	22060 MERLARA

14607 nws CANARO	EXTRAMELANGE 22035 ● nws MOLARA	13993 BRUCINE
14746 nws ASCEA	EXTRAMELANGE 20583 ● nws GELA	13994 ● nws BATTA
VIBRANT 14747 nws ACERRA	22006 BORGIO	14339 GORO
VIBRANT 14748 nws BRIGNOLE	EXTRAMELANGE 20854 BOCCIOLETO	13856 nws APICE
19070 nws BROLO	EXTRAMELANGE 20587 ● nws GRAGLIA	22070 CASASCO

Gauge

Gauge is the term used to describe the needle spacing and yarn dimensions.

It can be defined as the number of needles per unit inch. It is the major factor in determining the fabric density and appearance.

The larger the gauge, the finer the fabric you will get.

Fig: Finer gauge

Fig: Larger gauge

Customization

Embroiderys
Patches
Chain Stitch
Dye

Jacquard

Jacquard knit customization is a technique used to create detailed and complex patterns directly into the knitted fabric. It allows for intricate designs and motifs to be woven into the material rather than printed on top.

Fig: Jacquard

Fig: Jacquard (left) vs Interlock (right)

Jacquard vs Jacquard interlock

Jacquard on single Jersey is a local motif, with the yarn visible on the backside. The jacquard interlock technique is doulbe-layered, so the backside of the motif is mirrored on the backside.
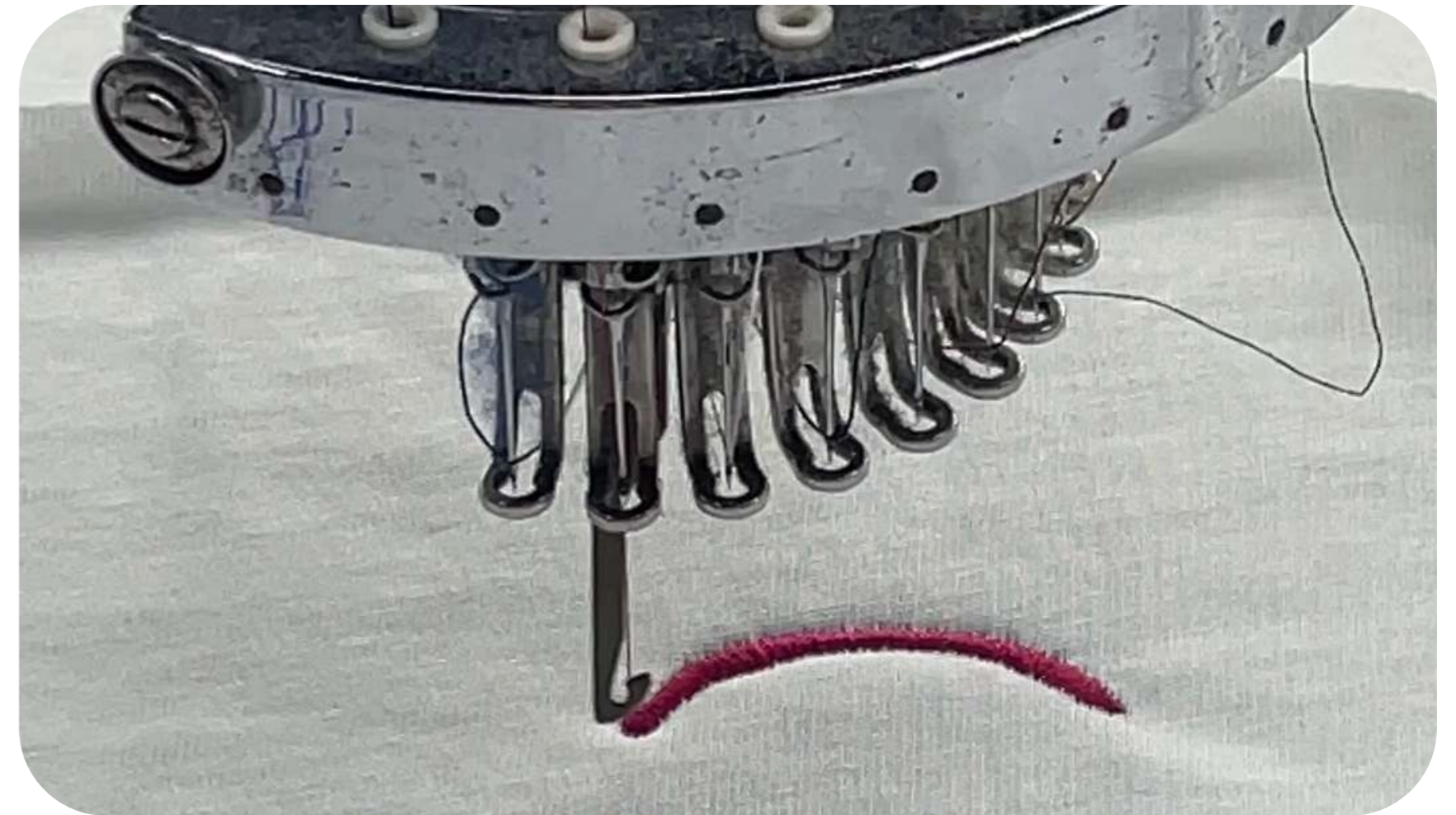
Embroidery

Fig: Embroidery on knit

Fig: Embroidery machine

Patch

Fig: Chenille patch
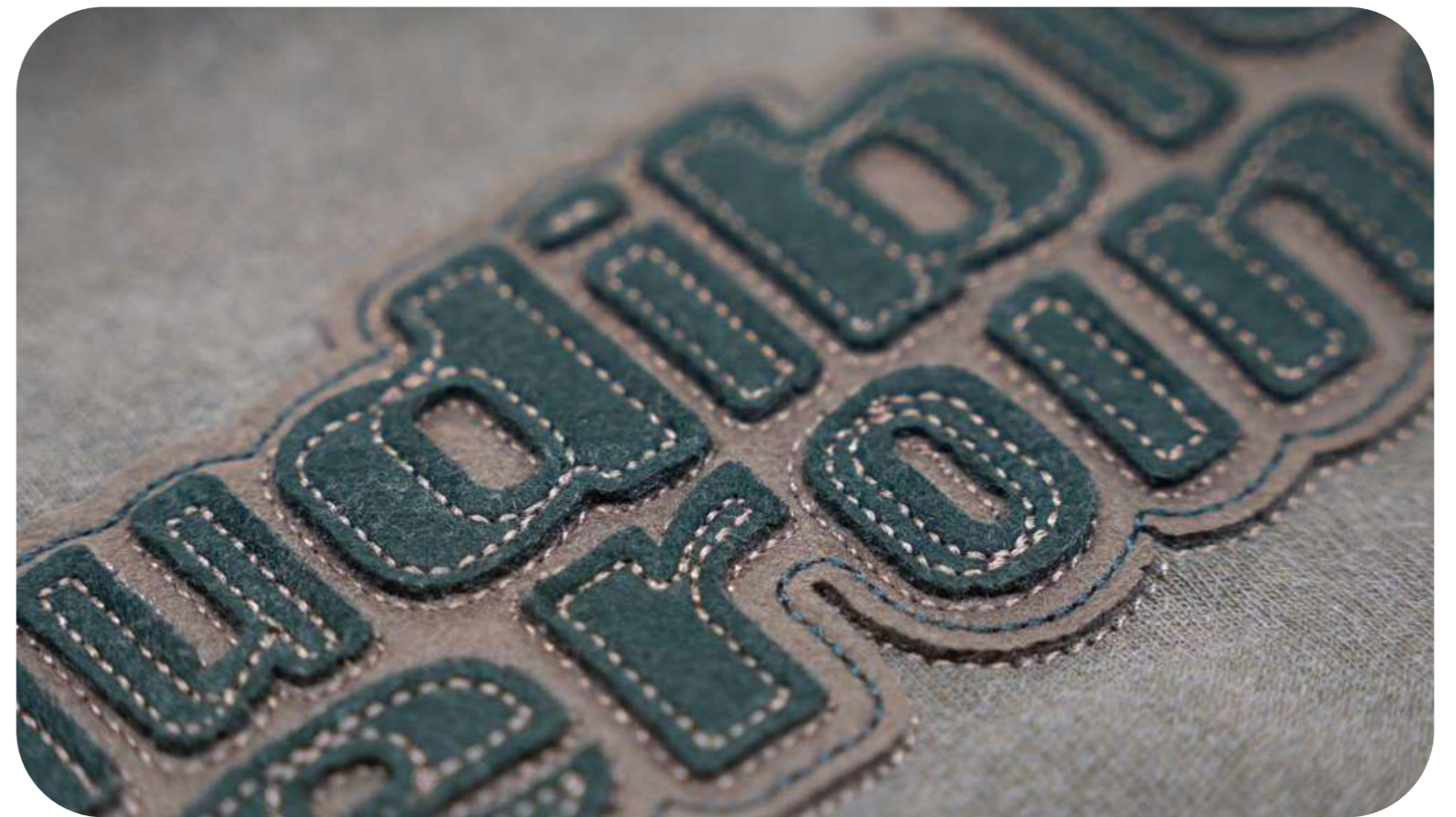

Fig: Patch

Label

Label

Labwear offers three different label types: Polyester, raw cotton canvas, and a woven label.

Polyester label: no minimum

Raw Cotton Canvas (most sustainable option):
Minimum order quantity is 250 pieces.

Woven label (most premium option):
Minimum order quantity is 1500 pieces.

Fig: Label options

Knitwear Care Instructions

How to Wash & Dry

Wash & Dry Guideline

```
Check the fabric care label
            |
Spray the stain with stain remover
        (if there's any)
            |
  ┌─────────┼─────────────┐
```

Machine Wash, Delicate mode	Handwash(recommand)	Laundry store
1. use a mesh lanudry bag		Dry cleaning (recommand)
2. Turn it inside out		

```
        |                |
    Low heat dry    Lay flat to air dry
```
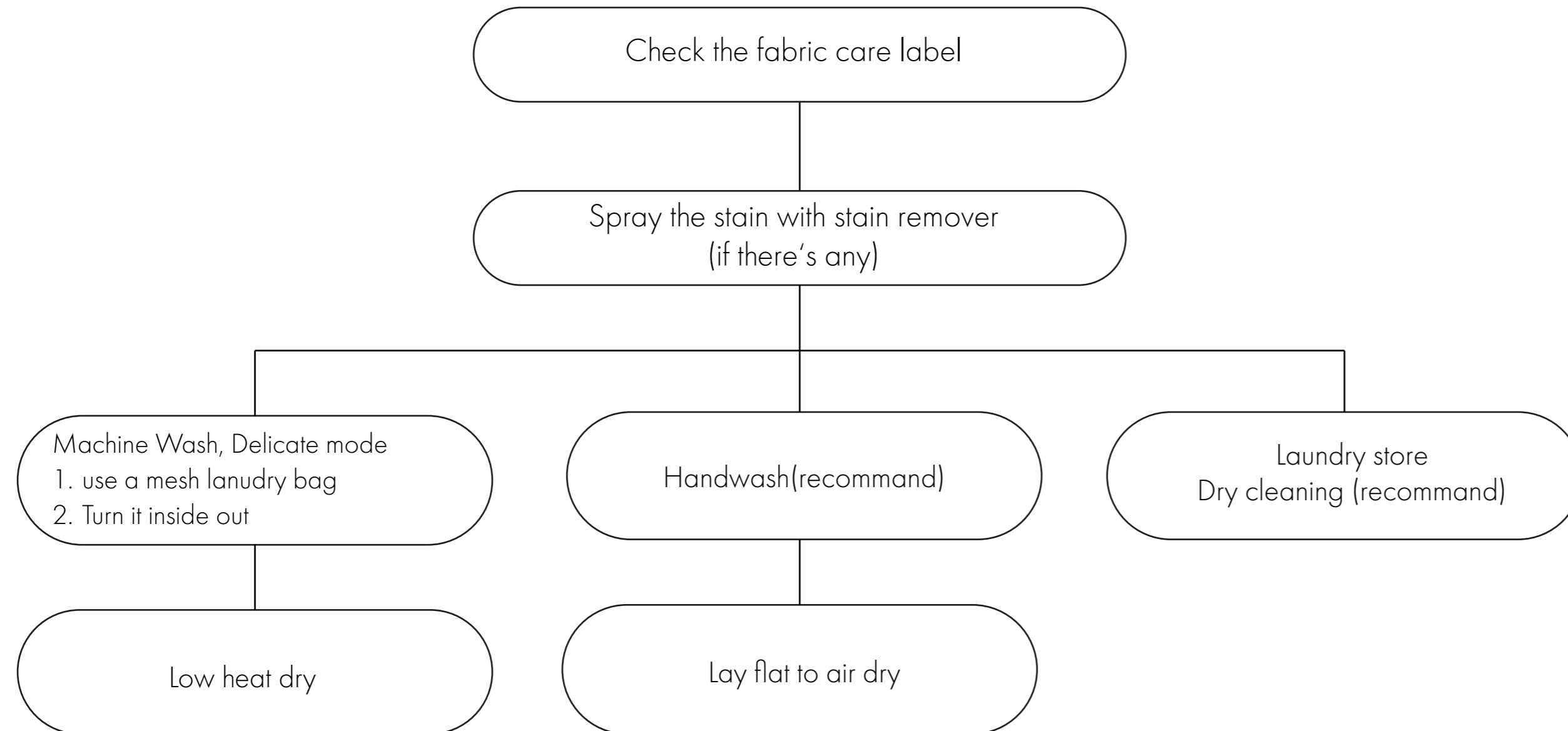
Red flags for knitwear

- do not over wash
- do not twist to push out the water (squeeze it gently)
- do not hang, fold instead

Cotton Care

```
┌─────────────────────────────────────┐
│        100% Cotton Knit Product      │
└─────────────────────────────────────┘
```

```
┌─────────────────────────────────────┐          *Spray the stain with stain re-
│  Follow the instructions on the care label  │          mover (if there's any)
└─────────────────────────────────────┘
```
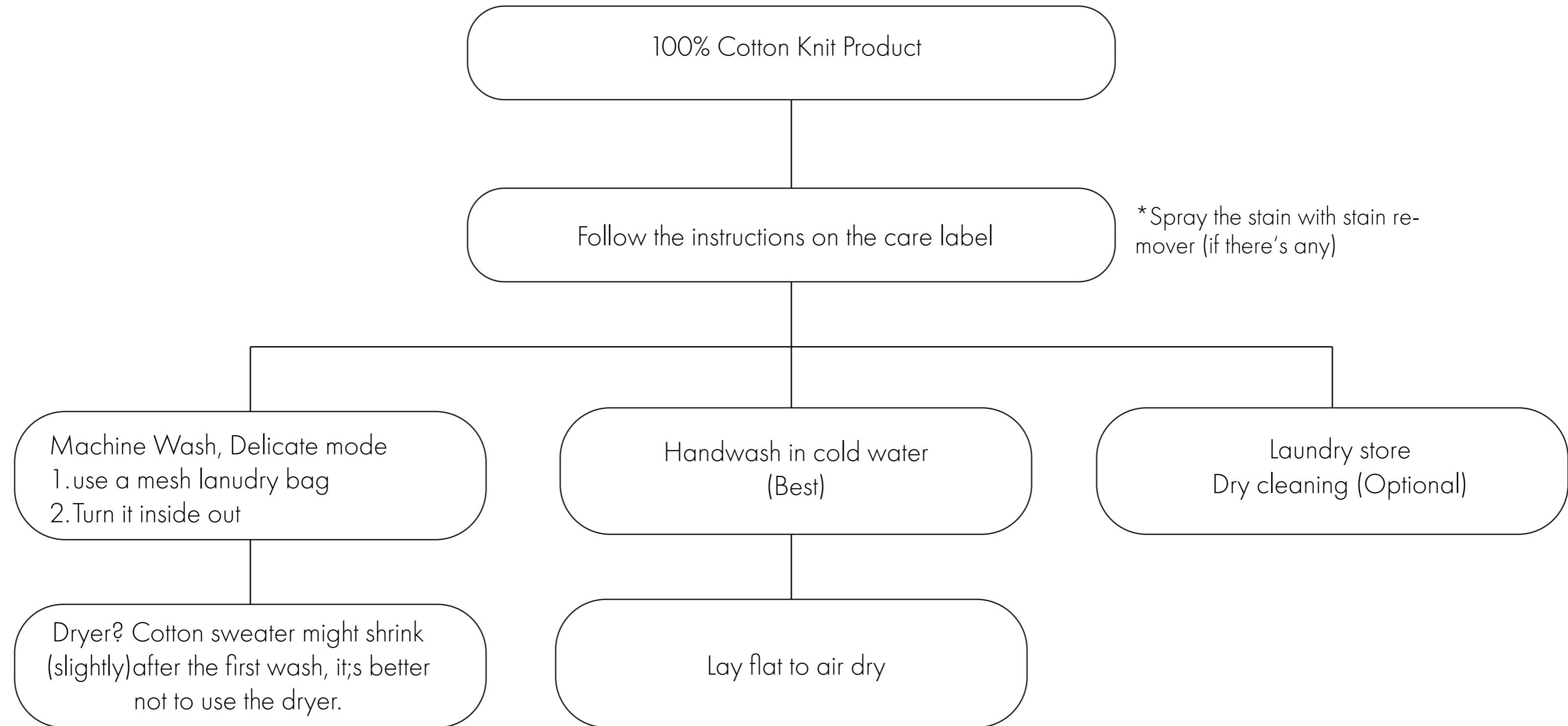
Machine Wash, Delicate mode
1. use a mesh lanudry bag
2. Turn it inside out

**Handwash in cold water
(Best)**

**Laundry store
Dry cleaning (Optional)**

Dryer? Cotton sweater might shrink (slightly)after the first wash, it;s better not to use the dryer.

Lay flat to air dry

Wool Care

Wool Knit Product

Follow the instructions on the care label

*Stain on the wool fabric, treat it right away, follow the care label for the re-commanded way.

Remember to use a delicate detergent for wool

Machine Washable wool (check the label)
1. use a mesh lanudry bag
2. Turn it inside out
3. turn the mode to wool wash

Handwash in cold water (30°C)
(Best)

Laundry store
Dry cleaning (Optional)

Dryer? No

Lay flat to air dry