The world of sewing

The needle by SCHMETZ

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Descriptions of sewing machine needles

- Butt
- Shank
- Blade

- Ranura corta
- Ranura curta
- Ojo
- Olho
- Eye
- Punta
- Ponta
- Point
- Ranura de la punta
- Ranhura da ponta
- Short groove
- scarf
- Point
- Long groove
- Land
- Scarf
Module Packaging

CANU = SCHMETZ Catalogue Number
NM = Blade Diameter- Number Metric
SIZE = Old Singer designation/Asia

134 = Needle System/needle designation in Europe
other needle designations
ex: DPx 5 used throughout Asia
135 x 5 o 135 x 7 designacion Singer-USA

( R ) = Point Designation
Here: Regular point or normal point
CANU = Catalogue Number

- 03:36 MA
- 20:05 _
- 14:25 EB
- 38:00 FB
- 20:05 PB

Needle point code

- MA = SPI (Acute round Point) RS
- EB = SES (Light Ball Point) FFG
- FB = SUK (Medium Ball Point) FG
- PB = SKF (Heavy Ball Point)
CANU= Catalogue Number

- 03:36 MA 1
- 22:15 EB 2
- 38:00 FB 8
- 44:36 9

1 = CHROMIUM PLATING
2 = NICKEL PLATING
8 = NICKEL PTFE
9 = TITANIUM
• 03:36 MA 1 ——— Original Design

• 20:05 EB 17 ——— SERV 7

• 37:20 12 ——— SERV 2

• 44:36 18 ——— SERV 8
## NEEDLE SIZE

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(R)  
Reg. Point  

SES- Light Ball Point  

SUK- Medium Ball Point
Needles and Machines
Stitch type 504

B-27

UY154 GAS
**Lockstitch**

**STITCH TYPE 301**

**SMALL SHANK**
Short Needle

- 16x231
- 16x257
- DBx1

**LARGE SHANK**
Short Needle

- 134
- 135x5
- 135x7
- Dpx5

**LARGE SHANK**
Long Needle

- 134-35
- 135x17
- DPX17
  
  Or

  - 134-35
CHAIN STITCH MACHINES
Stitch Type 401 & 407

Needle System
Long needle

UY 128
B-63
62X59

Cover Stitch
SELECTING THE NEEDLE

MACHINE

Needle System (System 134)

SCHMETZ 100/16

SIZE (NM)

Fabric R, SES, or SUK

POINT
Embroidery Needles
Single and Multiheads Machines

System DBXK5
Special Sewing Requirements

- Reinforced Blade SERV 7
- Cylindrical/ Slim Shape KN & SF
- Anti-adhesion Coating NIT
- Titanium Nitride Coating SERV 100 - TN
SCHMETZ SERV 7

134 (R) SERV 7
135X5 SERV 7
DPX5 SERV 7

Standard

134 (R)
135X5
DPX5
Needle Defection

Fig 1

Fig 2
SCHMETZ SERV 7
SCHMETZ SERV 7
SCHMETZ SERV 7
Special applications
Features
• Slim, continuous cylindrical blade without any reinforcement
• SUK Point
• Reduced cross-section of eye area

Advantages
✓ Smaller stitch holes than with standard needles
✓ Minimises knitwear damage due to the slim shape
✓ Smaller stitch holes than with standard needles
✓ Minimises knitwear damage due to the slim shape
SF – EXTRA SLIM POINT

EXTRA SLIM POINT

KN = Very Fine Knitwear
SF = Extremely Fine Knitwear (40 to 42 gauge)

Features:
• Very slim shape from eye to point
• Ball point- SUK-
• Cylindrical blade without any reinforcement
NIT – SPECIAL COATING

Features
- Anti-adhesive surface with excellent abrasion resistance
- Abrasion Resistance
- Corrosion resistance

Advantages
- Use of very thick sewing threads possible
- Dry Running
- Better gliding properties
Application: NIT - Nickel - PTFE

• Material with a low softening/melting point
• Man-made Materials
• Materials with high man-made fibre content
• Material with special finishing (Flame Retardant)
• Heavy and Hard materials
• Coated materials
• Minimize smearing on eye & blade of needle
**SPECIAL COATING SERV 100 TN**

Titanium Nitride

**Advantages:**

- Excellent Wear Resistance
- Long lasting Needle Tip
- Less Needle Breakage
- High Productivity

**Features:**

- Ultra Hard Titanium Nitride Coating
- Very Hard Needle Surface
- Anti-adhesive Surface
Special Application

Systems

134 GO RRT

135 X 17 GO RRT

Features:

• Eye Enlarged
• Enlarged Groove
• Round Point - Slightly Rounded Tip
Other Special Needles

System 253 S/C

System 1032 B 1/36

CONNECTIONG THE FUTURE
June 20-22, 2017 McCormick Place, Chicago, Illinois
Special Application

[Images of Schmetz needles with text and packaging details]
Blindstitch Needles

SYSTEM 251 LG or 29 BL
SEWING PROBLEMS & SOLUTIONS

• DAMAGED NEEDLE POINT
• THERMAL DAMAGE
• MATERIAL DAMAGE DUE TO NEEDLE SIZE
• THREAD BREAKAGE & SKIP STITCHES
• SEAM PUCKERING
• MACHINE PROBLEMS
Damage Needle Point

Mesh Damage
Temperature profile during the sewing process

SCHMETZ 100/16

250°C  280°C  300°C  320°C  340°C
Thermal Damage
Needle Temperature

Influence of different qualities of sewing thread

Test Parameter:
- Machine: lockstitch (Type 301)
- Speed: 4,000 / min⁻¹
- Needle system: 134/ DPX5
- Size: 90/ 14
- Material: Denim (Jeans) 14 oz.
- Number of layers: 4
- 1) Melting after: 4.5 sec/ seg
- 2) Melting after: 7 sec/ seg
- 3) Melting at machine stop

Bar chart showing needle temperatures for different sewing threats.
Lubrication of thread

- too much lubrication
- irregular lubrication
- perfect lubrication
Mesh Damage caused by oversize needles

NM 90
SIZE 14

NM 70
SIZE 10
Oversize needle
Oversize Needle
Displacement Puckering

-Thread size-
Displacement-Seam Puckering-Needle Size-

Fabric displacement of the fibers

Needle size + Thread
Tension Puckering

- Thread Tensions
- Stitch Density
Feed Puckering
Irregular Tension-Thread spool incorrectly placed
Needle Defection

Fig 1

Fig 2
Needle Eye Damage
Cutting Point Needles
Thank you very much for being interested

Herzlichen Dank für Ihr Interesse

Merci beaucoup pour votre intérêt

Muchas gracias por su interés

Muito obrigado pelo seu interesse

Grazie mille per il Suo interesse

御清聴有り難うございました

Сердечно благодарим Вас за Ваш интерес.

欢迎垂询！