Cutting points – Needles for stitching leather and other materials

Narrow cross point “S”

Diamond point “DI”

Narrow wedge point “P”

Reverse twist spear point “VR”

Reverse twist point “LR”

Round point with small triangular tip “SD1”

Wide reverse twist point “LBR”

Half triangular point “DH”

Twist point “LL”

Triangular point “D”

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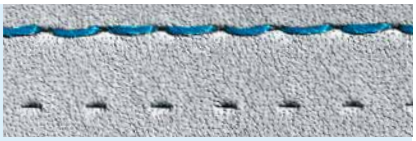
Cutting points – Needles for stitching leather and other materials

Narrow cross point "S" or "N CR"

Product: Cutting point with a lens-shaped cross-section. The incision is made at right angles to the threading direction.
Result: A very straight seam

Point symbol: **Seam appearance:**



Materials:
Suitable for all types of leather

Applications:
- Footwear manufacture
- Manufacture of bags, suitcases, etc. with coarse ornamental seams
- Manufacture of belts and straps
- Manufacture of car seats

Narrow wedge point "P" or "NW"

Narrow wedge point "PCL"

Narrow wedge point "PCR"

Product: Cutting point with a lens-shaped cross-section. The incision is made in threading direction.
Result: A very strong seam

Point symbol: **Seam appearance:**

Materials:
Suitable for all types of leather

Applications:
- Footwear manufacture
- Manufacture of bags, suitcases, accessories
- Manufacture of car seats

Highlight:
The twist ensures that, when the needle emerges from the material being sewn, the thread is protected in the twist groove and is thus not drawn over the edge of the groove and eye or over the cutting edge and not damaged.

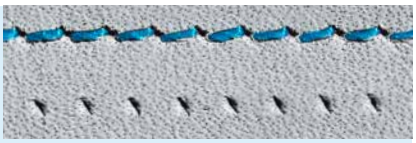
CL: Left twist groove below eye for hooks positioned to the right of the needle.

CR: Right twist groove below eye for hooks positioned to the left of the needle. It is particularly useful as the lefthand needle on a twin needle lockstitch machine.

Reverse twist point "LR" or "R TW"

Product: Cutting point with a lens-shaped cross-section. The incision is made at a 45° angle to the threading direction.
Result: A decorative seam inclined slightly towards the left

Point symbol: **Seam appearance:**



Materials:
Suitable for all types of leather

Applications:
- Clothing industry
- Footwear manufacture

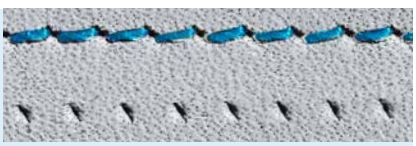
- Manufacture of bags, suitcases
- Manufacture of car seats

Highlight:
The best needle for decorative seams

Wide reverse twist point "LBR"

Product: Cutting point with a lens-shaped cross-section. The incision is made at a 45° angle to the threading direction. The cutting effect is achieved beyond the diameter of the needle.
Result: A raised, decorative seam inclined towards the left

Point symbol: **Seam appearance:**



Materials:
Suitable for all types of leather

Applications:
- Clothing industry
- Manufacture of bags, suitcases
- Upholstery manufacture

Highlight:
Recommended for decorative seams which characterize the design

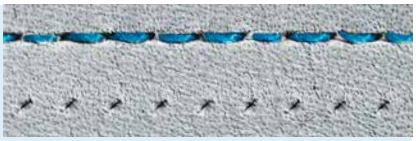
Cutting points – Needles for stitching leather and other materials

Twist point "LL" or "TW"

Twist point "LLCR"

Product: Cutting point with a lens-shaped cross-section. The incision is made at a 135° angle to the threading direction.
Result: A slightly recessed, straight seam

Point symbol: **Seam appearance:**



Materials:
Suitable for all types of leather

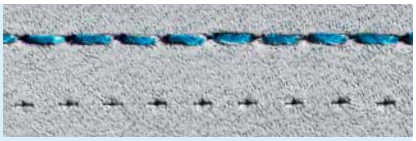
Applications:
LL point:
- Footwear manufacture
- Manufacture of bags, suitcases
- Particularly suitable for shoe repairs

LLCR point: For the manufacture of footwear, in order to achieve the same seam appearance with the hook positioned to the left of the needle as achieved using the LR point in conjunction with a hook positioned to the right of the needle.

Diamond point "DI" or "DIA"

Product: Cutting point with a rhombic cross-section. The centered incision is made at right angles to the threading direction. The seam appearance corresponds to that achieved with the narrow cross point (S point);
however, the four cutting edges of the DI point allow heavy, hard material to be pierced more easily.
Result: A very straight, recessed seam

Point symbol: **Seam appearance:**



Materials:
Suitable for heavy, dry, hard leather

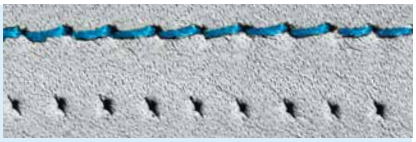
Applications:
- Footwear manufacture
- Manufacture of bags, suitcases

Highlight:
- Absolutely precise and tidy seam appearance
- Correct stitch appearance
- No needle deflection

Reverse twist spear point "VR" or "R TW SP"

Product: Cutting point with a rhombic cross-section. The incision is made at a 45° angle to the threading direction.
Result: A seam inclined slightly towards the left
Better cutting effect than the comparable reverse twist point (LR point)

Point symbol: **Seam appearance:**

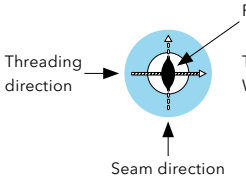


Materials:
Suitable for hard, dry leather

Applications:
- Footwear manufacture
- Manufacture of bags, suitcases

Highlight:
Due to the four cutting edges,
- a correct stitch appearance
- no needle deflection

is achieved.

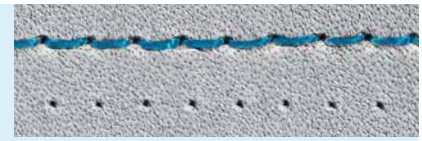


The shown point symbols and seam appearance refer to laterally threaded needles.
When using machines with needles threaded from the front, the seam appearance might change significantly.

Cutting points – Needles for stitching leather and other materials

Round point with small triangular tip "SD1" or "TRI TIP"

Point symbol: 
Threading direction

Seam appearance: 

Product: Round point with a very small, triangular cross-section. The small triangular tip cuts approx. 10% of the stitch hole, with the remaining 90% being displaced by the conical round point (R point).

Result: A straight seam
- A tidy seam appearance
- Correct stitch appearance and less needle deflection than with a round point (R point)
- Smaller incision than when using a cutting point

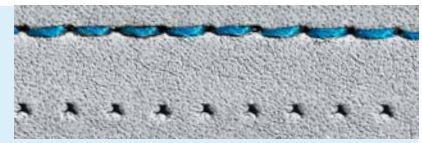
Materials:
- Fine leather
- Clothing made of leather and imitation leather
- Thin, synthetic leather materials
- Materials coated with PVC/PUR, e.g. tarpaulins, tents, coated table cloths

Applications:
- Stitching leather
- Stitching plastic
- Stitching hard fibres
- Stitching films

Highlight:
Multidirectional sewing:
The stitch appearance remains the same in all sewing directions when using multidirectional sewing techniques (programmable sewing machines).

Half triangular point "DH"

Point symbol: 
Threading direction

Seam appearance: 

Product: Cutting point with a triangular cross-section; smaller than D point.

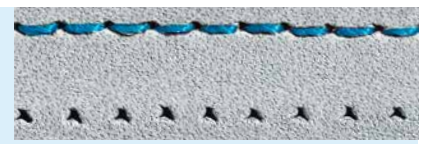
Result: A straight seam

Materials:
- Composites, e.g. laminated material together with plastic sections
- Plastic sections
- Hard pressboard
- Tarpaulin material
- Tent canvas

Applications:
- Stitching upholstery
- Manufacture of vehicle interiors
- Manufacture of tarpaulins, tents, awnings

Triangular point "D" or "TRI"

Point symbol: 
Threading direction

Seam appearance: 

Product: Cutting point with a triangular cross-section.

Result: A straight seam

Materials:
Suitable for hard, dry leather

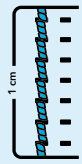
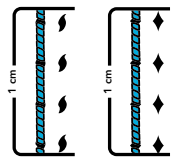
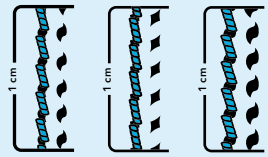
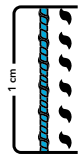
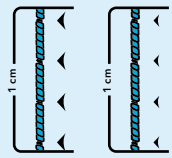
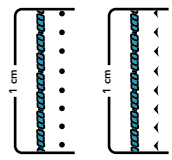
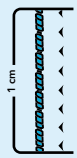
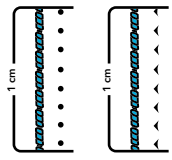
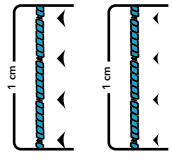
Applications:
- Manufacture of footwear, especially for heavy footwear (e.g. safety shoes)
- Stitching upholstery
- Stitching plastics, cardboard, heavy pressboard, paper

Highlight:
The best cutting effect of all cutting points

Cutting points – Needles for stitching leather and other materials

Choosing the point shape:
The point shape is determined by the application and the desired seam appearance.

Note:
The seam appearance refers to needles threaded laterally. It might change significantly when using machines with needles threaded from the front.

Application	Seam appearance	Point shape	
Very strong seams **Fine ornamental seams**	 P/PCL/PCR	**P** **PCL** **PCR**	Narrow wedge point Narrow wedge point with left twist groove below eye Narrow wedge point with right twist groove below eye
Normal seams **Coarse ornamental seams** **Very straight seams**	 S DI	**S** **DI**	Narrow cross point Diamond point
Decorative seams **(ornamental seams/** **topstitch seams)**	 LR VR LBR	**LR** **VR** **LBR**	Reverse twist point Reverse twist spear point Wide reverse twist point
Very straight seams	 LL	**LL**	Twist point
Coarse/normal seams **Cross seams**	 D DH	**D** **DH**	Triangular point Half triangular point
Embroidery Special features, e.g. appliqué	 R SD1	**R** **SD1**	Normal round point Round point with small triangular tip
Multidirectional sewing	 SD1	**SD1**	Round point with small triangular tip
Material combinations, composites: **– Garments**	 R SD1	**R** **SD1**	Normal round point Round point with small triangular tip
– Industrial sector	 D DH	**D** **DH**	Triangular point Half triangular point

The right needle size:
Two essential criteria must be taken into account:

1. Application/ sewing thread
The application and the sewing thread (type and size) determine the needle size.

2. Material and material properties
The harder and thicker the material, the thicker the needle must be.

Continuous filament

Application	Polyamide 6.6 (Nylon) Thread size No*	tex*	Needle size NM	SIZE	Polyester Thread size No*	tex*	Needle size NM	SIZE
Coarse decorative seams	4	750	280-330	28-30	4	750	250-300	27-29
	5	600	250-300	27-29	5	600	250-280	27-28
					6	500	230-250	26-27
	7	429	230-250	26-27	7	429	200-230	25-26
	8/9	375/333	200-250	25-27	8/9	375/333	180-200	24-25
	10/11	300/273	160-230	23-26	10/11	300/273	140-180	22-24
	12	250	160-230	23-26	12	250	140-180	22-24
Coarse seams	13	231	160-200	23-25	13/14	231/214	130-160	21-23
	15	200	160-180	23-24	15	200	125-140	20-22
					18	167	120-130	19-21
	20	150	120-160	19-23	20	150	110-130	18-21
					24/25	125/120	100-110	16-18
	30	100	100-140	16-22	30	100	100-110	16-18
Medium seams	40	75	100-120	16-19	40	75	100-110	16-18
					50	60	90-100	14-16
	60	50	80-100	12-16	60	50	80-90	12-14
					70	43	75-80	11-12
	80-90	38/33	70-90	10-14	80/90	38/33	70-80	10-12
Stay seams (heel seams)	40	75	100-120	16-19	40	75	100-110	16-18
	60	50	80-100	12-16	60	50	80-90	12-14
	80/90	38/33	70-90	10-14	80/90	38/33	70-80	10-12
					100	30	65-70	9-10

SCHMETZ Tip:
These tables only include the most common sewing threads. Cotton threads, sewing silk and embroidery thread have been omitted for the sake of clarity.

If you have specific questions concerning these threads, please ask your thread manufacturer.

Core spun

Application	Polyester/Cotton Thread size No*	tex*	Needle size NM	SIZE	Polyester/Polyester Thread size No*	tex*	Needle size NM	SIZE
Coarse decorative seams	4	750	230-280	26-28				
	5	600	180-250	24-27				
	6	500	180-200	24-25				
	8	375	180-200	24-25	8	375	160-200	23-25
	12	250	160-180	23-24	12	250	140-180	22-24
Coarse seams	15	200	140-160	22-23				
	20	150	140-160	22-23	20	150	120-160	19-23
	24	125	130-160	21-23				
	25	120	120-140	19-22	25	120	110-140	18-22
	28	107	120-140	19-22				
	30	100	120-140	19-22	30	100	110-130	18-21
	35/36	86/83	110-130	18-21	35/36	86/83	100-120	16-19
Medium seams	40	75	100-120	16-19	40	75	100-110	16-18
	50	60	100-110	16-18	50	60	90-100	14-16
	60/75	50/40	90-100	14-16	60/75	50/40	90-100	14-16
	80	38	90-100	14-16	80	38	80-90	12-14
	90	33	80-90	12-14				
	100	30	80-90	12-14	100	30	70-90	10-14
Stay seams (heel seams)	40	75	100-120	16-19	40	75	100-110	16-18
	60/75	50/40	90-100	14-16	60/75	50/40	90-100	14-16
	80	38	90-100	14-16	80	38	80-90	12-14

* No = Label number

tex = Unit of size in g/1000 m (e.g. 75 tex = 1000 m yarn weigh 75 g)

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