

# Premium Parts

for Autocoro spinning machines

Good – better – premium

# Table of Contents



Spinning components

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SpinBox parts

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Additional spare parts

---



Partial modernization

---




Tools and accessories

---



Recommended spinning accessories

---



Warranty and expected service life for technology  
and wear parts

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	Side
SUESSEN – a Synonym for Competence in Open-End Spinning	4
Premium Parts	6

### Spinning components 7

<i>ProFiL</i> Rotors	8
SOLIDRING and Opening Rollers	11
Navels	17
TwinDisc	19
Torque Stop	21
Channel Plates	23
Fibre Channels	25
Side Walls	26
Sliver Condensers	27

### SpinBox parts 29

Accessories for Opening-Roller Housing	30
Rotor Housings and Air Seals	31
Oil Containers and Seals	33
Thrust-Bearing Seals	34
<i>ProFiL</i> Cartridge	34
Brake Linings	35
Couplings	35
Cover Plates	37
Accessories SpinBox	37
Tension Pulleys	38
Accessories SpinBox Cover	39
Accessories Worm Gear Shaft	41

### Additional spare parts 43

Winding Head	44
Piecer Carriage, Coromat, DCU	52
Machine Components	55
Trash Removal Belts	56

	Side
<b>Partial modernization</b>	<b>57</b>
ShockAbsorber	58
Thrust-Bearing Modernization with <i>ProFiL</i> Cartridge	60
TrashChannel Modernization	62
Carbon-Fibre Rod Modernization	64
SE 9 Performance Kit	66

### Tools and accessories 69

Axial Rotor Position	70
Centring of Channel Plate	71
TwinDisc Maintenance	72
Thrust-Bearing Unit	73
Winding Head	74
Special Tools	75

### Recommended spinning accessories 77

Survey according to Applications	78
Rotors	80
SOLIDRING	87
Navels	91
Torque Stop	94

### Warranty and expected service life for technology and wear parts 95

# SUESSEN – a Synonym for Competence in Open-End Spinning

Since the early sixties of the 20th century, SUESSEN has been intensively engaged in Open-End rotor spinning. SUESSEN has repeatedly given important impetus to rotor spinning by continuous innovation.

In 1971, SUESSEN presented the OE SpinBox with TwinDisc bearing at the Paris ITMA. This new bearing made rotor speeds of up to 80 000 rpm possible for the first time, while just 40 000 rpm could be achieved with direct bearings. Today, the TwinDisc bearing enables speeds up to 160 000 rpm, compared with 110 000 rpm as maximum speed possible with direct bearings.

1973: first SUESSEN SpinBox in Schubert & Salzer RU11 machine.

At the Milan ITMA in 1975, SUESSEN showed the first automatic rotor spinning machine with the SE 6 SpinBox and the CleanCat and SpinCat robots for automatic cleaning and piecing-up. This development was responsible for the industrial breakthrough of rotor spinning.

Between 1975 and 1999 SUESSEN developed and produced the SpinBoxes SE 7, SE 8, SE 9 and SE 10 exclusively for Schlafhorst Autocoro. Owing to the technological and technical improvements in the course of these years, the SE 9 SpinBox finally allowed rotor speeds of up to 130 000 rpm.

1984: Introduction of the new SOLIDRING that offers significant advantages over the conventional wire clothing.

1995: Delivery of the two millionth SpinBox for Autocoro rotor spinning machines.

1998: Introduction of the SQ and SC-M SpinBox generation for modernizing existing SE 7 to SE 10 SpinBox designs.

2000: SUESSEN established the Premium Parts product line and got into the spare parts business by supplying original spare parts for the SE 7 to SE 10, SC and SQ SpinBox generations.

2001: SUESSEN developed the SC-S SpinBox for the SAVIO FlexiRotorS 3000/DuoSpinner rotor spinning machine.

2002: Market introduction of the SUESSEN SC-R SpinBox for the RIETER R40 rotor spinning machine.

2012: Market introduction of the SUESSEN S 60 SpinBox for the RIETER R60 rotor spinning machine.

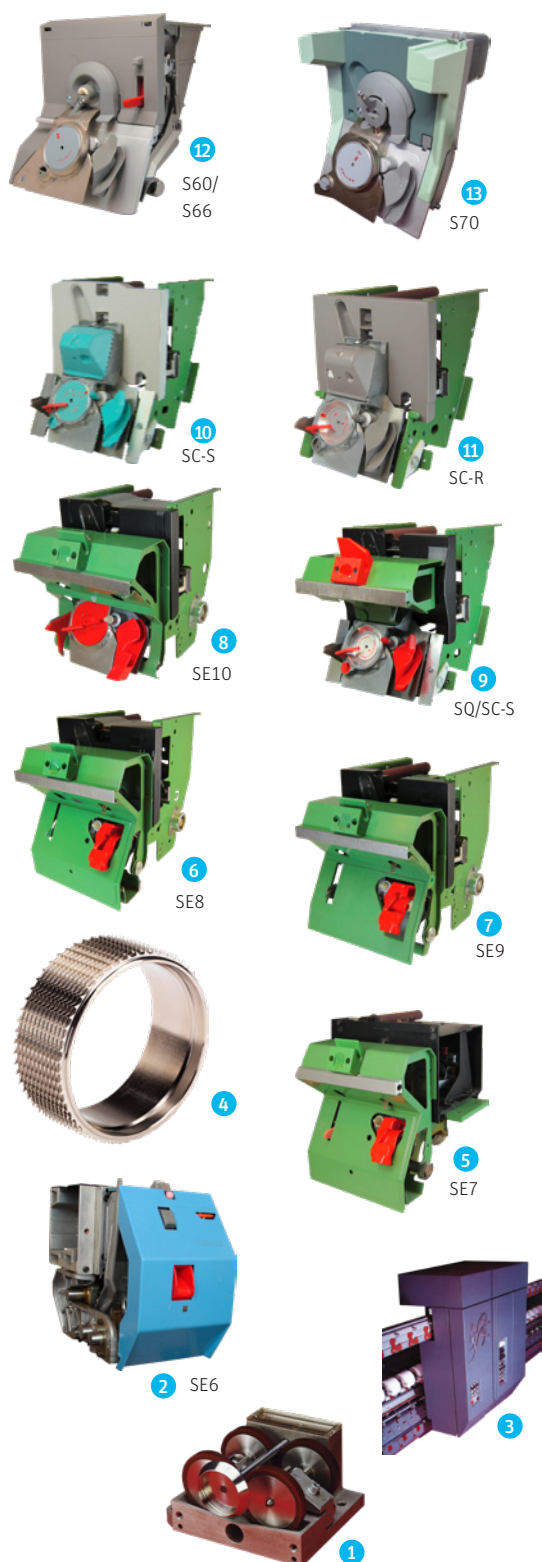
2016: Market introduction of the SUESSEN S 66 SpinBox for the RIETER R66 rotor spinning machine.

To date, SUESSEN has manufactured and delivered over 3 million SpinBoxes.

Since the very start of the development, SUESSEN-WST have filed 284 patents in the rotor spinning sector.

With innovative SpinBox designs, the SpinBox automation and repeated new developments of high-end spinning accessories, SUESSEN has contributed to the current technical and technological state of rotor spinning.





**2021:** Market introduction of the SUESSEN S70 SpinBox for RIETER R70 rotor spinning machines. <sup>13</sup>

**2012:** Market introduction of the SUESSEN S60 SpinBox for RIETER R60 rotor spinning machines. Optimized in 2016 to S66. <sup>12</sup>

**2002:** Market introduction of the SUESSEN SC-R SpinBox for RIETER R40 rotor spinning machines. <sup>11</sup>

**2001:** Market introduction of the SUESSEN SC-S SpinBox for SAVIO rotor spinning machines. <sup>10</sup>

**2000:** SUESSEN established the Premium Parts product line and got into the spare parts business.

**1998:** Introduction of the SQ and SC-S SpinBox generation for modernizing existing SE7 to SE10 SpinBox designs. <sup>8 9</sup>

**1975 – 1999:** Market introduction of the SUESSEN SE7, SE8, SE9 and SE10 SpinBoxes exclusively for Schlafhorst Autocoro. <sup>5 6 7</sup>

**1984:** Introduction of the new SOLIDRING. <sup>4</sup>

**1975:** First automatic rotor spinning machine with SUESSEN SE6 SpinBox, CleanCat and SpinCat for automatic cleaning and piecing-up. <sup>2 3</sup>

**1973:** First SUESSEN SpinBox in Schubert & Salzer RU11 machine.

**1971:** SUESSEN presented the first OE SpinBox with TwinDisc bearing. Compared to the direct bearing, the TwinDiscs were able to boost the rotor speed from 40 000 rpm up to 80 000 rpm. <sup>1</sup>

# Premium Parts

In the year 2000, the Premium Parts product line was launched, enabling SUESSEN to enter the spare parts business as Original Spare Part Supplier for SE 7 to 10, SC and SQ SpinBox generations.

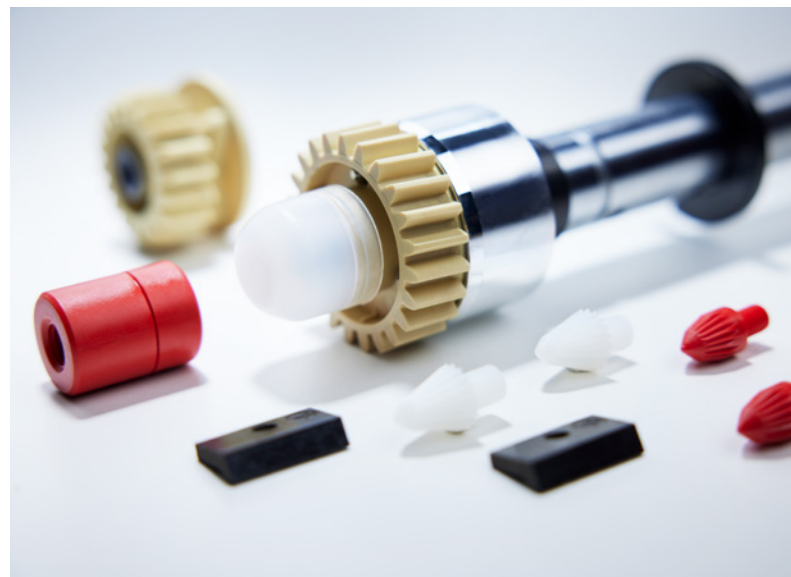
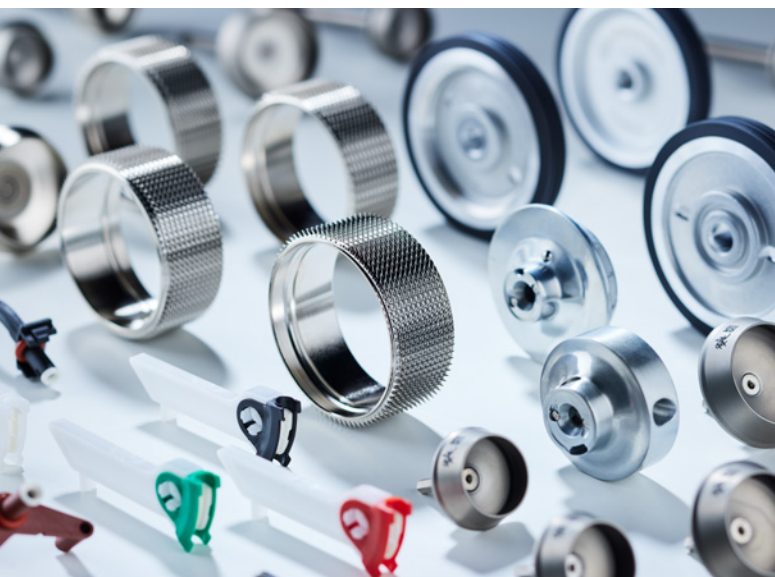
SUESSEN developed and manufactured for over 20 years the SE 7, 8, 9 and 10 SpinBoxes exclusively for Schlafhorst Autocoro, as well as the corresponding spinning accessories. We are therefore right to say we are the original spare parts supplier, and nobody knows the SpinBox better than we do.

The product line Premium Parts not only stands for the Original SpinBox spare parts for types SE 7, 8, 9, 10, SC and SQ, as well as for high-quality and innovative spinning accessories for these SpinBox types. We have made consequent use of our knowledge and experience, acquired with rotor spinboxes and modernization during almost 40 years, to extend our product portfolio successively by Premium Products “around the SpinBox“ and for subsequent SpinBox generations.

The customer benefit is given first priority in our development work. All our efforts in development and production of our Premium Parts components are aiming at enabling the customers to draw optimum benefit from our products with respect to yarn quality, efficiency, power saving and service life.

Premium Parts is not just spare parts. Trying to help our customers to solve their problems, we have developed quite some innovative packages for partial modernization offering solutions to different problems. The packages can be installed in existing Schlafhorst Autocoro machines to improve their efficiency, yarn quality and/or power saving. All packages for partial modernization have a very short payback period.

Please put your confidence in our long lasting experience and competence in rotor spinning and let us be your Premium supplier.





# Spinning Components



# ProFiL Rotors

In 2004, the outside contour of the SUESSEN rotors was optimized by FEM methods. So the stress in the *ProFiL* Rotors was reduced and mechanically and technologically possible speed could be increased. In addition, the energy consumption is lower owing to the reduced air friction by up to 14%.

Another positive result of the modified profile is the reduced moment of inertia. The braking and acceleration periods are shorter, brake pads will last longer and piecing-up is easier.

All rotor shafts are specially wear protected. Shaft ends are reinforced with ceramic inserts.

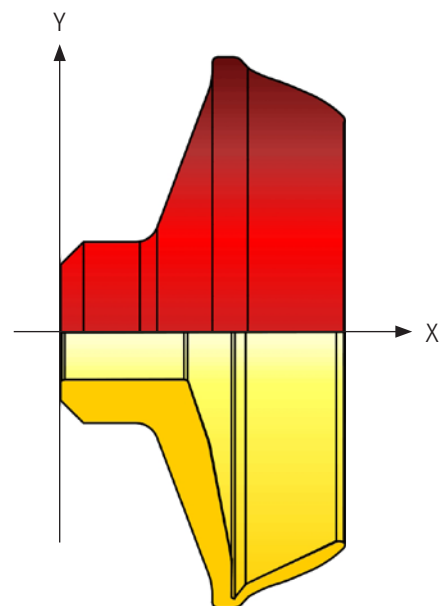
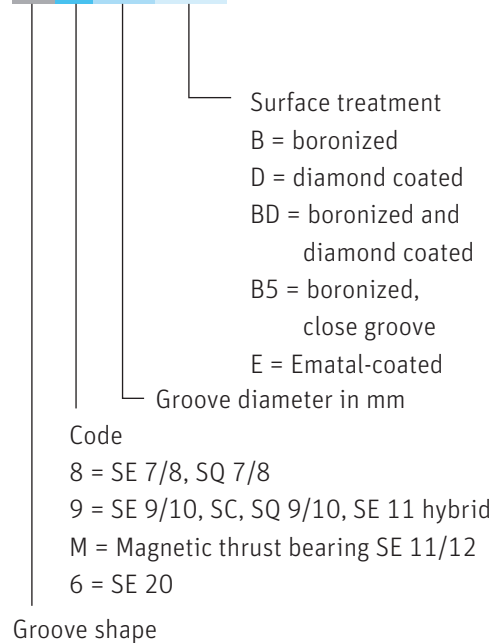
The proven inner geometry of the rotor is designed to obtain best yarn quality, low ends-down rates and easy piecing-up.

Precise manufacturing and dynamic balancing are responsible for a smooth running. The proven 2 µm diamond coating offers optimum results with regard to fibre orientation and the homogeneous sliding of the fibres into the rotor groove.

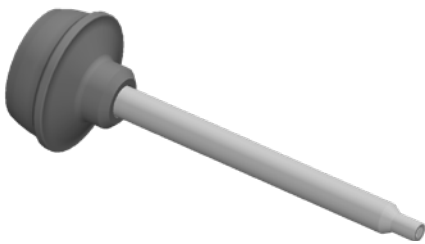
SUESSEN *ProFiL* Rotors are available for all Autocoro Spin-Boxes SE 7 to SE 12 and for SUESSEN SpinBox SC and SQ, in various designs for different material and applications.

## Example for denomination

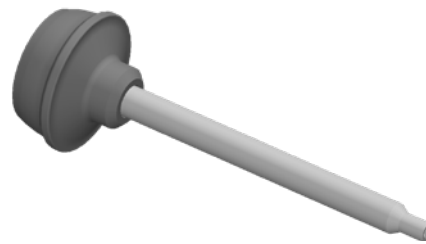
T 934BD



ProFiL Rotors  
Hybrid shaft 8.0  
SE 7/8



ProFiL Rotors  
Hybrid shaft 8.0  
SE 9/10/11/12/  
SC/SQ



Type	Part No.
T 833 BD**	10141792
T 834 B**	10611603
T 834 B5**	10141853
T 834 BD**	10141691
T 837 B	10141868
T 837 BD	10141696
T 841 B	10141866
T 841 B5	10141862
T 841 BD	10141702
T 847 B	10141878
T 847 BD	10141708
TC 836 BD	10141715
TC 840 B	10541404
TC 840 BD	10141721
TC 846 BD	10141729
TC 856 BD	10141734
G 833 BD	10141739
G 836 B	10141879
G 836 BD	10141751

Type	Part No.
G 840 B	10141883
G 840 BD	10141756
G 846 B	10141887
G 846 BD	10141767
U 833 BD	10141759
U 840 B	10141893
U 840 BD	10141777
U 846 B	10141898
U 846 BD	10141782
S 840 BD	10141844
S 846 B	10141840
S 846 BD	10141838
S 855 E	957.0975
S 856 BD	10142420
S 865 E	957.0993
V 835 BD***	10142048
V 848 BD***	10142042

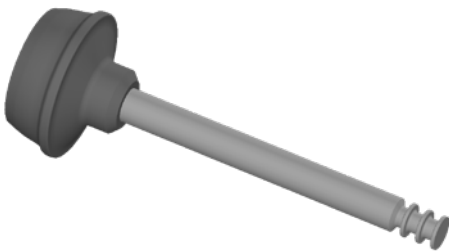
Type	Part No.
T 933 B5 **	10141976
T 933 BD**	10231843
T 934 B**	10611630
T 934 B5**	10142436
T 934 BD**	10141633
T 937 BD	10141652
T 941 B	10142440
T 941 B5	10142439
T 941 BD	10141653
T 947 B	10142443
T 947 B5	10142444
T 947 BD	10141656
T 957 BD	10141661
TQ 933 BD	11208589
TC 934 B	10708302
TC 934 BD	10142090
TC 936 B	10957965
TC 936 BD	10141969
TC 940 B	10661309
TC 940 BD	10141994
TC 946 BD	10141973
TC 956 BD	10141974

Type	Part No.
G 930 BD	10141984
G 931,5 BD	10233912
G 933 BD	10141989
G 936 BD	10141991
G 940 B	10142438
G 940 BD	10141992
G 946 BD	10141993
GSQ 931 BD**	10141986
K 931 B5	10141979
K 931 BD	10141977
U 933 BD	10142435
U 936 BD	10142007
U 940 B	10142092
U 940 BD	10142009
U 946 B	10142441
U 946 BD	10142010
S 940 BD	10141980
S 946 B	10142442
S 946 BD	10141978
S 956 BD	10141982
S 956 E	959.2243
V 936 BD***	10142013
V 940 BD***	10142015
V 948 BD***	10142019

\*\*Requires washer 1.5 mm (see page 18)

\*\*\*Requires washer 3 mm (see page 18)

## ProFiL Rotors Magnetic shaft SE 11/12 (MRPS)



Type*	Part No.	Type*	Part No.
T M33 B5**	10665207	G M36 BD	10787321
T M33 BD**	10665209	G M40 BD	11065660
T M34 B5**	10787260	G M46 BD	11065662
T M34 BD**	10787341		
T M34B**	10975298	KT M28 BD	11009096
T M37 BD	10787345		
T M41 B	10787346	K M31 B5	11011673
T M41 B5	10787347	K M31 BD	10997914
T M41 BD	10787371		
T M47 B	11086261	U M40 BD	10787375
T M47 BD	10931015	U M46 BD	11201525
TQ M33 BD	11156181	S M40 BD	10976898
		S M46 B	11182323
TC M34 BD	10961726	S M46 BD	10998680
TC M36 BD	10787372		
TC M40 BD	10787373		
TC M46 BD	10787374		
G M28 BD	10801054		
G M30 BD	10787257		
G M31 BD	10787258		
G M33 BD	10787300		

## Rotors SE 20



Type*	Part No.	Type*	Part No.
G 628 BD	11204051	TT 636 BD	11246695
G 630 BD	11203934	TT 640 BD	11247404
G 631 BD	11257227	TT 646 BD	11247294
G 633 BD	11210484		
G 633 B	11284403	U 640 BD	11205095
G 636 BD	11200860	U 646 BD	11205132
G 636 B	11248852		
G 640 BD	11203851	S 652 DN	11247684
GL 628 BD	11246841		
GL 631 BD	11247142		
K 631 BD	11204048		
T 633 BD**	11204149		
T 634 BD**	11238003		
T 636 BD	11204295		
T 640 BD	11204463		
T 646 BD	11204529		
T 646 B	11288706		

\*Further rotor types available on demand.

\*\*Requires washer 1.5 mm (see page 18)

\*\*\*Requires washer 3 mm (see page 18)



# SOLIDRING and Opening Rollers

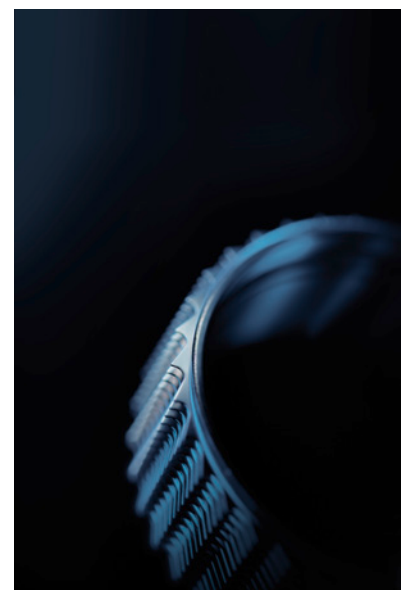
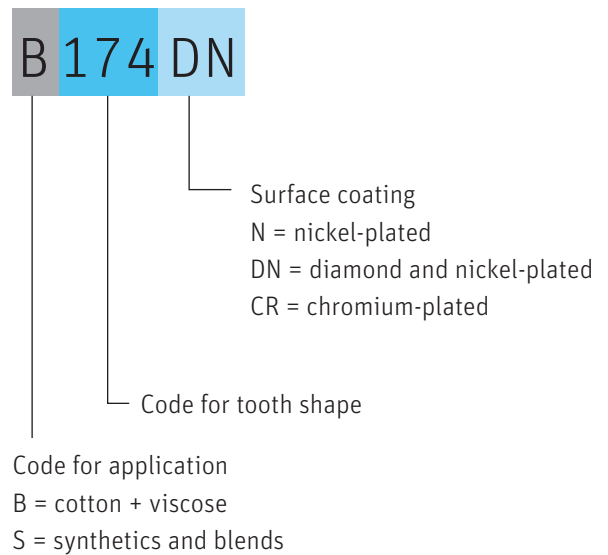
SUESSEN developed the SOLIDRING and was the first to introduce it into the market. The SOLIDRING opens the sliver, extracts trash and neps, separates and parallelizes the fibres. The SOLIDRING performance is responsible for the yarn quality.

SUESSEN SOLIDRINGS are ground tooth for tooth in hardened chromium steel, thus permitting closest possible manufacturing tolerances. In addition, this manufacturing technique guarantees the highest possible and homogeneous hardness from tooth tip to tooth ground. There is no gap as in a wire-tooth clothing. Compared with conventional saw-toothed wire clothing, SOLIDRINGS offer the following enormous technical and technological advantages:

- considerably increased service life
- better, deeper combing
- uniform fibre transportation
- uniform fibre delivery to the fibre channel
- uniform yarn parameters over a long service life

SUESSEN SOLIDRINGS are available for all Autocoro SE 7 to SE 20, for SUESSEN modernization with Compact SpinBox SC and SQ, in various designs for different fibre materials and applications.

## Example for denomination

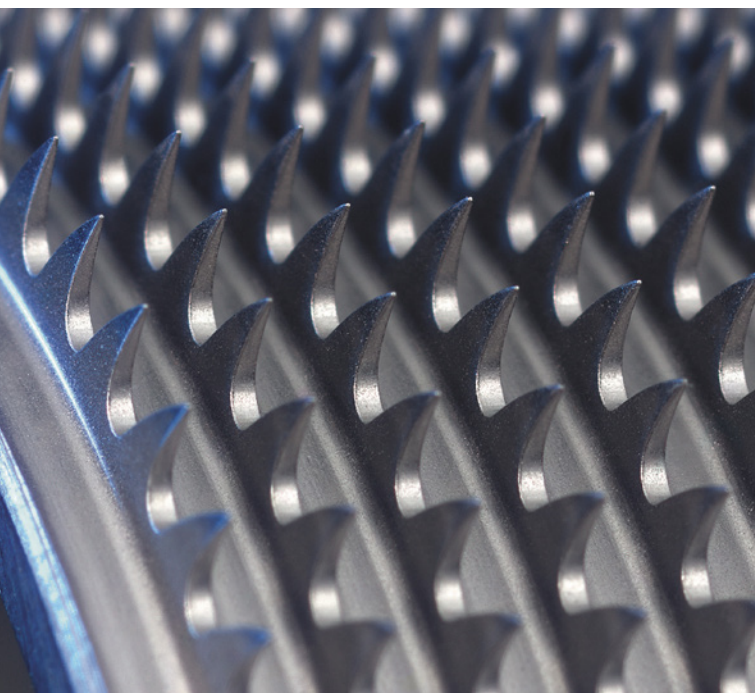


## New CR coating for 100% cotton

As a result of the coating process, the relatively thick diamond layer, which is responsible for the excellent wear resistance, can only be applied on a slightly rounded tooth. The thin nickel layer, on the other hand, can be applied on a sharper tooth, which offers a much better opening work to the fibre beard, but unfortunately is rapidly worn.

In order to meet the demands of the market, a new type of coating had to be found which ensures long lifetime, despite of a very thin layer.

The new CR coating for applications with 100% cotton precisely fulfils these conditions. It combines the advantage of the N coating quality with the lifetime of the DN coating. Compared with the DN SOLIDRING, this results in better opening and fibre singularization, better trash extraction and lower ends-down rates and consequently in a better yarn quality with an identical lifetime of the SOLIDRING.



## SOLIDRING S 43-3.6

The SOLIDRING with the S 43 tooth form has been specially developed for processing fine PES yarns. For years, customers have successfully used this SOLIDRING S 43 with the following advantages over the standard S 21 tooth form for such applications:

- almost no “merry-go-round” fibres, meaning the fibres are coming off better from the opening roller and get into the fibre channel
- consequently less imperfections in the yarn
- and less tendency to shedding, especially in the subsequent weaving process

Compared to standard tooth forms and speeds, the lifespan of the S 43 tooth form is reduced.

The nomination “3.6” simply defines the actual tooth pitch of 3.6 mm – this leads to 33% more teeth in the circumference compared to the former S 43 SOLIDRING.

Consequently, more teeth opening the same fibre beard (compared to the former S 43) causes less wear to the individual tooth of the S 43-3.6 SOLIDRING, resulting in a longer lifespan. Practical field tests proved a 20% to 25% increase in lifespan with the S 43-3.6 over the former S 43.





## SOLIDRINGS

### SE 7/8/9/10/11/12/20/SC/SQ

<b>SOLIDRING</b>	<b>Part No.</b>
B 174 N	958.3894
B 174 DN	958.3895
B 174 CR	10232544
B 174-4.8 N	958.1044
B 174-4.8 DN	958.1046
B 187 DN	958.6803
B 20 N	958.6804
B 20 DN	958.5010
B 20 CR	10523556
S 21 N	957.9299
S 21 DN	957.9485
S 25 DN	959.5748
S 43-3.6 N	10414980
S 43-3.6 DN	10231503

<b>Cup spring SE 7/8/9/10/11/12</b>	<b>Part No.</b>
B 174 N	954.1943
B 174 DN	954.1944
B 174-4.8 N	958.6689
B 174-4.8 DN	958.6688
B 187 DN	956.2116
B 20 N	957.4542
B 20 DN	954.6124
S 21 N	957.4543
S 21 DN	954.1946
unlabelled	954.5429

Additional types available on demand

## Opening rollers

Opening roller SE 7/8	Part No.
B 174 N	10171050
B 174 DN	10171053
B 174-4.8 N	10171023
B 174-4.8 DN	10171022
B 187 DN	10170976
B 20 N	10171052
B 20 DN	10171029
S 21 N	10170975
S 21 DN	10171055

Opening roller SE 9	Part No.
B 174 N	10171415
B 174 DN	10171414
B 174-4.8 N	10171340
B 174-4.8 DN	10171319
B 187 DN	10171445
B 20 N	10171419
B 20 DN	10171418
S 21 N	10171341
S 21 DN	10171412
S 43-3.6 N	11041590

Opening roller SE 10	Part No.
B 174 N	958.6825
B 174 DN	958.6826
B 174-4.8 N	958.6868
B 174-4.8 DN	958.6869
B 187 DN	958.6827
B 20 N	958.6828
B 20 DN	958.6829
S 21 N	958.6830
S 21 DN	958.6831

Opening roller SQ	Part No.
B 174 DN	959.1398
B 174-4.8 N	958.2287
B 174-4.8 DN	958.2288
B 20 N	959.2391
B 20 DN	959.2906
S 21 N	957.9298
S 21 DN	957.9484

Opening roller SC	Part No.
B 174 N	958.0259
B 174 DN	958.0258
B 174-4.8 N	958.1043
B 174-4.8 DN	958.1045
B 187 DN	958.6874
B 20 DN	958.5011
S 21 N	957.9650
S 21 DN	957.8210

Opening roller bearing with SOLIDRING seat, without clamp ring	Part No.
SE 7/8/9	958.2567
SE 10/11/12/SQ	955.8427
SC	959.0073

Opening roller bearing, complete	Part No.
SE 7/8	958.2286
SE 9	958.2568
SE 10/11/12/SQ	955.4461
SC	959.0072

Additional types of opening rollers available on demand

## Additional components for opening roller

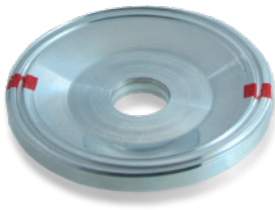


<b>958.2286</b>	<b>958.2568</b>	<b>955.4461</b>	<b>959.0072</b>
Opening roller bearing, complete	Opening roller bearing, complete	Opening roller bearing, complete with ventilation groove	Opening roller bearing, complete
SE 7/8	SE 9	SE 10/11/12/SQ	SC



<b>953.5489</b>	<b>953.5488</b>
Clamping ring	Clamping ring
SE 7/8	SE 9/10/11/12/SC/SQ

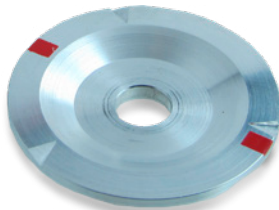
## Flanges and locking screws



**955.5974**

Flanged wheel

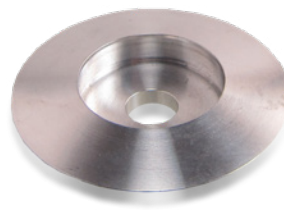
SE 7/8/9



**957.0368**

Flanged wheel

SE 10



**10957709**

Flanged wheel

SE 11/SE 12



**957.7350**

Flanged wheel

SC/SQ



**954.1910**

Clamping screw

SE 7/8/9/10



**10235002**

Clamping screw

SC/SQ



**10975976**

Clamping screw

SE 11/12



**953.5489**

Clamping ring

SE 7/8



**953.5488**

Clamping ring

SE 9/10/11/12/20/SC/SQ

# Navels

## Navels

The selection of rotor and navel has a considerable influence on the yarn character. The navel is responsible for yarn hairiness and spinning stability.

Notches and whirls mainly produce hairiness of different levels. Notches and surface structure are responsible for the spinning stability. The influence of the surface structure on spinning stability rises with increasing rotor speed. To achieve optimum results, different fibre raw materials require different surface structures.

Our standard navels have been conceived for applications which do not permit high take-off speeds. They are more economic in case of raw material with:

- a high percentage of short fibres
- a high percentage of trash
- a high micronaire

Our *ProFiL* Navels on the other hand are perfect for applications with the corresponding fibre raw material enabling or requiring high take-off speeds.

SUESSEN Navels are available for all Autocoro-SpinBox types SE 7 to SE 20 and for SUESSEN SpinBox SC and SQ, in numerous designs for a variety of materials and applications.



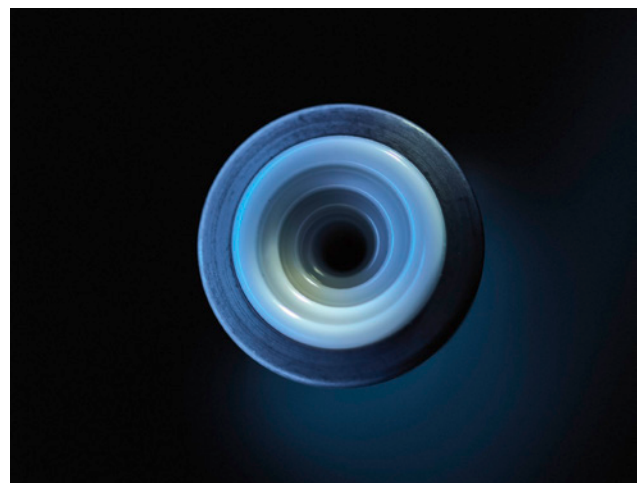
## *ProFiL* Navels

At high take-off speeds, the influence of the ceramic surface of the navels on fibre damages is unquestioned. *ProFiL* Navels are made of state-of-the-art ceramic composites guaranteeing a very smooth surface without pores and therefore minimize thermal damages to the fibres.

Another important parameter considering potential production increase is the navel geometry. The geometry of the *ProFiL* Navels has been optimized especially in the yarn contact areas. So the *ProFiL* Navels reduce the spinning tension level and allow in contrast to standard navels

- higher production speeds without affecting the yarn quality, nor causing more end-breaks at the higher spinning speeds,
- reduction of the ends-down rate and improved yarn quality at the original spinning speeds.

*ProFiL* Navels allow highest possible yarn production speeds. The spinning speed can be increased by 5 to 12% without affecting the yarn quality or increasing the ends-down level.



**SE 7/8/9**

Type	Part No.	Type	Part No.
KN	958.6236	KN8R R4	11108616
KN R4	959.0651	KN8 2R4	11108615
KN4	11234124	KS	958.6352
ProFiL 4	11231576	ProFiL S	11229104
KN3	11108576	KS R4	11169599
KN4 R4	11234214	KS 2R4	11168673
KN4 2R4	11234199	KS M	11233498
ProFiL 6	10495182	ProFiL SM	11257487
KN8	11108605	MIMA 1	11108652
KN8R	11108614	MIMA 2	10694114
KN8 R4	11108612		

**SE 10/11/12/20/SC/SQ**

Type	Part No.	Type	Part No.
KN	12267757	KN8R R4	11108794
KN R4	10231716	KN8 2R4	11108757
KN4	11135292	KN8R 2R4	11108790
ProFiL 4	11231663	KS	10231732
KN3	11108684	ProFiL S	11135347
KN4 R4	11234259	KS R4	11169332
KN4 2R4	11234370	KS 2R4	11168709
ProFiL 6	11245937	KS M	11233532
KN8	11108752	ProFiL SM	11257448
KN8R	11108754	MIMA 2	10231737
KN8 R4	11108756		



**958.6351**

Washer for navel 1.5 mm

SE 7/8/9



**10097649**

Magnet washer for navel 1.5 mm

SE 10/11/12/20/SC/SQ



**10097650**

Magnet washer for navel 3.0 mm

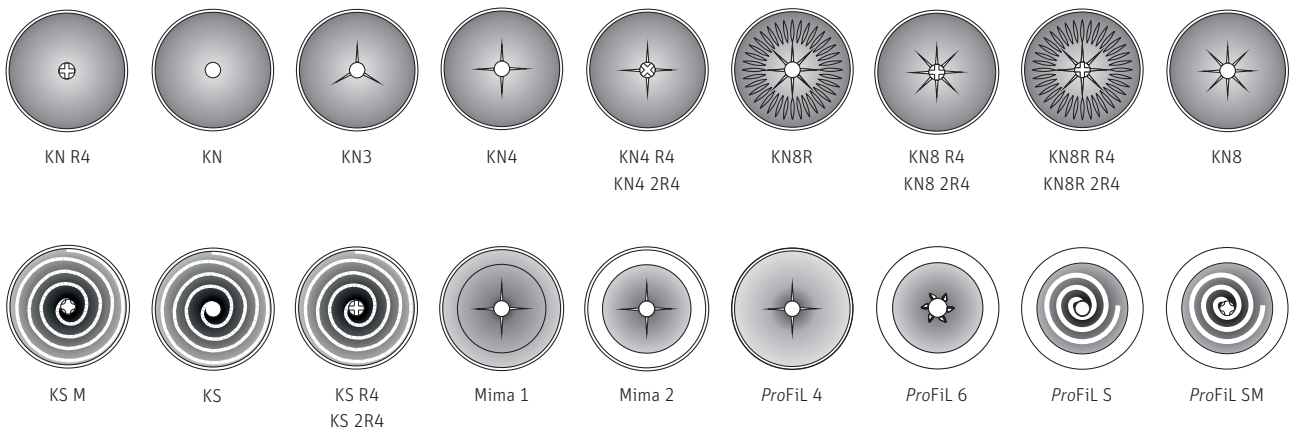
SE 10/11/12/20/SC/SQ



**10400808**

Magnet washer for navel aluminium 1.5 mm

SE 10/11/12/20/SC/SQ



# TwinDisc

In 1971, SUESSEN invented the first TwinDisc bearing for OE spinning machines. Owing to its vast experience with TwinDisc bearings, SUESSEN has developed the patented design with two cooling grooves, which considerably reduce the heat on the TwinDiscs even at highest rotor speeds (see Fig. 1). A reduced heat on the tires will increase the operating life substantially.

A multitude of tests have proved that the heat is dissipated from the tire by means of the cooling grooves. Heat dissipation through the body, as claimed by some other manufacturers, is irrelevant in practice.

The low weight of Original SUESSEN TwinDiscs reduces slippage when the rotor is started or stopped.

Polyurethane tires of SUESSEN TwinDiscs are manufactured by casting. The tires are very homogeneous and non-porous. Only cast tires have an optimum molecular cross-linking and offer excellent damping properties at a relatively high Shore hardness. The low flexing work of the tires ensures a long operating life and low energy consumption. In addition, cast tires have a high resistance against hydrolysis and are capable to carry high dynamic loads caused by the contact pressure and impacts of the rotor shaft. Problems as shown in Fig. 2 are prevented.

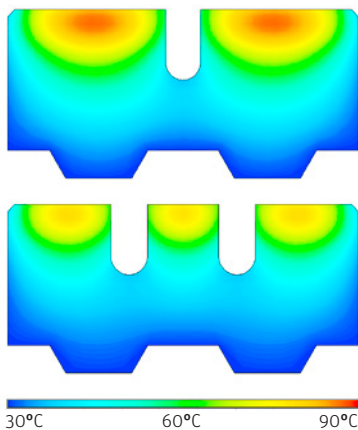


Fig. 1: SUESSEN TwinDisc, new standard: comparison of heating characteristics of tires with 1 or 2 cooling grooves respectively at identical rotor speed



Fig. 2: Hydrolysis on TwinDisc

The power consumption of TwinDisc bearings is not influenced by the shape of the revolving components, but considerably by the TwinDisc tires. In contrast with the discs of other manufacturers, the energy consumption of SUESSEN TwinDiscs is lower (see Fig. 3). Hence at a rotor speed of 120 000 rpm about 4.0 W per spinning position is saved compared to the competitors' discs.

Energy consumption of TwinDisc bearing unit  
Load to contact roller suspension 21 N

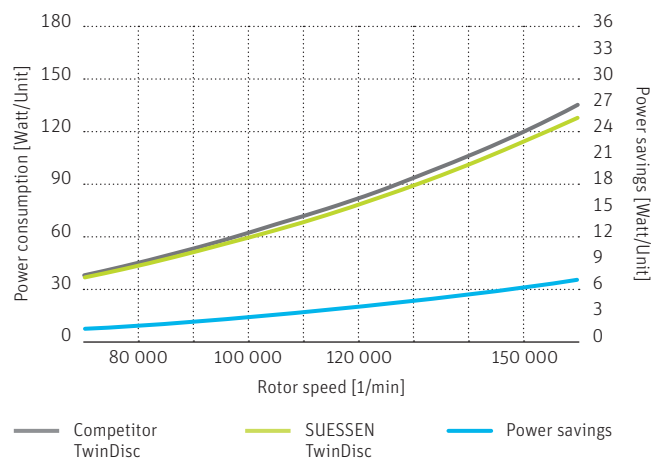


Fig. 3

## TwinDisc

SE 7/SQ 7	Part No.
TwinDisc N with 2 cooling grooves	958.6839
TwinDisc R with 2 cooling grooves	958.6840

SE 8/SQ 8	Part No.
TwinDisc N with 2 cooling grooves	958.6841
TwinDisc R with 2 cooling grooves	958.6842
TwinDisc L with 2 cooling grooves	10586713
TwinDisc roll N	958.6835
TwinDisc roll R	958.6836
TwinDisc roll L	10913318
TwinDisc bearing	952.6058

SE 9/10/11/12/SQ 9/SC	Part No.
TwinDisc N with 2 cooling grooves	958.6843
TwinDisc R with 2 cooling grooves	958.6844
TwinDisc L with 2 cooling grooves	10447546
TwinDisc roll N	10403973
TwinDisc roll R	10589715
TwinDisc roll L	10492491
TwinDisc bearing	11084115

SE 7/8/9/10/11/12/SC/SQ	Part No.
ProFiL Reflector	10147672

## ProFiL Reflector

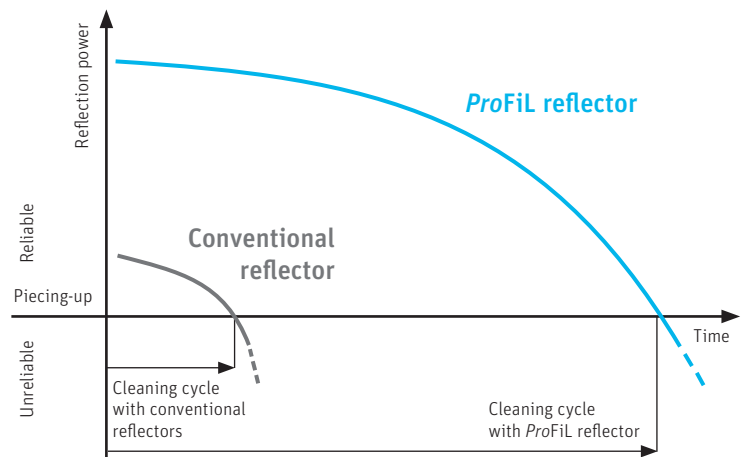
SUESSEN has developed a new reflector, the red *ProFiL* Reflector. Its reflective power is up to four times better than that of conventional reflectors, which results in much higher reliability of the piecing process over extended periods of time.

With the same degree of contamination, the speed detection is disturbed comparatively less often, resulting in better efficiency.



The red colour reduces so-called false signals, which are due to defects in the reflector disc (e.g. scratches), especially in the non-reflecting areas of the disc. As a result, the efficiency of the piecer carriage remains higher over longer periods of time. This has a direct positive effect on the machine efficiency.

Furthermore, cleaning intervals are extended up to four times and even more. Therefore, machine down time due to cleaning is significantly reduced. (See diagram)





# Torque Stop

SE 7/8/9/SC/SQ	Part No.
Torque Stop complete green TS 30-0-G	956.2114
Torque Stop complete red TS 30-3-R	956.2115
Torque Stop complete white TS 30-3-W	956.2762
Torque Stop complete black TS 30-3-S	956.2654
Torque Stop Clip green	957.5120
Torque Stop Clip red	957.5122
Torque Stop Clip white	957.5123
Torque Stop Clip black	957.5121
Take-off tube complete TS 30	956.3697
Take-off tube complete	no longer available
O-Ring	954.0948
Take-off tube complete TS 37	953.6435
O-ring for take-off tube TS 37	294.0113

SE 10	Part No.
Torque Stop complete green TS 30-0-G	958.6875
Torque Stop complete red TS 30-3-R	958.6876
Torque Stop complete white TS 30-3-W	958.6878
Torque Stop complete black TS 30-3-S	958.6877
Torque Stop Clip green	957.5120
Torque Stop Clip red	957.5122
Torque Stop Clip white	957.5123
Torque Stop Clip black	957.5121
Take-off tube complete	957.5332
O-ring	958.1005

SE 11/12/20	Part No.
Torque Stop green	10842001
Torque Stop red	10841990
Torque Stop white	10841984
Torque Stop black	10842002

SE 11/12	Part No.
Take-off tube complete	10976009





**956.3697**

**953.6435**

**957.5332**

**10976009**

Take-off tube complete

Take-off tube complete

Take-off tube complete

Take-off tube complete

TS 30

TS 37

SE 10

SE 11 - 12

SE 7/8/9/SC/SQ

SE 7/8/9/SC/SQ



**954.0948**

**294.0113**

**958.1005**

O-Ring for take-off tube

O-Ring for take-off tube TS 37

O-Ring for take-off tube

SE 7/8/9/SC/SQ

SE 7/8/9/SC/SQ

SE 10 - 20



**10232284**

**956.1089**

Flange eye

Threaded pin

SE 7/8/9/10/11/12/20/SC/SQ

SE 7/8/9

# Channel Plates

Channel plate without valve lever	
SE 7/8/9	Part No.
KP 31 F	958.6845
KP 31 U	958.6847
KP 33 F	958.6849
KP 36	958.6851
KP 40	958.6853
KP 40 F	958.6855
KP 46	958.6857
KP 56	958.6859

Channel plate with valve lever	
SE 7/8/9	Part No.
KP 31 F	958.6846
KP 31 U	958.6848
KP 33 F	958.6850
KP 36	958.6852
KP 40	958.6854
KP 40 F	958.6856
KP 46	958.6858
KP 56	958.6860

Channel plate adapter	
SE 10	Part No.
28	957.7502
31	957.6225
36	957.6242
40	957.6228
46	957.8379
56	957.8463

Adapter	
SE 11/12/20	Part No.
28	10972606
31	10729134
36	10998640
40	10998652

Channel insert	
SC 1-M/SQ	Part No.
28	11085443
31	11085584
40	11085754
46	11085826

Channel insert with Speedpass	
SC 2-M/SQ	Part No.
28	11113012
31	11114880
40	11120457
46	11120610

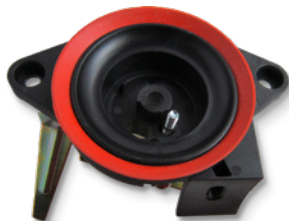


Channel plate with valve lever  
SE 7/8/9

Channel plate Adapter  
SE 10

Channel Insert  
SC/SQ

Adapter  
SE 11/12/20



958.6832

Support plate

SE 10

957.6345

Support plate

SQ

## Accessories



**954.1059**

Sealing ring

SE 7/8/9/10



**957.4679**

Sealing ring

SE 10



**957.6028**

Sealing ring new

SE 10



**957.4678**

Sealing ring old

SE 10



**10975967**

Sealing ring

SE 11-20



**10509626**

O-Ring for adapter

SE 11-20



**11070459**

Seal adapter plate

SE 11-20



**956.0783**

Sealing ring

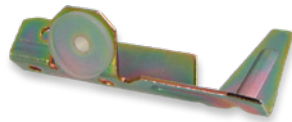
SC/SQ



**953.8601**

Leg spring

SE 7/8/9/SC/SQ



**953.9249**

Valve lever complete

SE 7/8/9/10/SQ



**953.8600**

Sealing plate

SE 7/8/9/10/SQ



**Adhesive Elastosil E41,**

90 ml tube

SC/SQ

SUESSEN recommend to use Adhesive Elastosil E41 for all sealing rings and to procure it locally, because it is declared as dangerous goods class 3.

# Fibre Channels



**955.9408**

**958.6517**

**955.9407**

**958.6892**

Fibre channel complete D-FG

Fibre channel complete U

Fibre channel complete D

Fibre channel complete

SE 9

SE 9

SE 9

SE 10



**10384853**

**10427594**

**952.6756**

Fibre channel complete

Fibre channel complete

Sealing ring fibre channel

SQ

SC

SE 7/8/9/10/SQ



**954.8526**

**957.7507**

**957.7504**

**10975963**

Sliding piece

Sliding piece

Sliding piece

Fibre channel seal

SE 7/8/9

SE 10

SQ

SE 11/12/20

# Side Walls



**953.3832**

Side wall

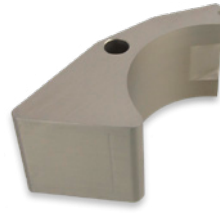
SE 7/8



**955.9192**

Side wall D-FG

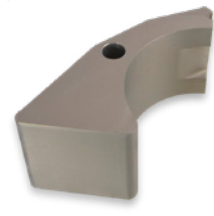
SE 9



**956.0205**

Side wall U

SE 9



**955.9193**

Side wall D

SE 9



**957.5171**

Cover housing

SE 10



**10427240**

Cover housing

SC 1 M/SQ B1

**10427425**

Cover housing

SC 2 M/SQ B2

### Combination side walls/fibre channels/channel plates

SpinBox type	Side wall	Type	Fibre channel	Type	Channel plates with valve lever	
SE 8	953.3832		956.4818		KP 31 U	958.4848
					KP 36	958.6852
					KP 40	958.6854
					KP 46	958.6858
					KP 56	958.6860
SE 9	955.9192	D-FG	955.9408	D-FG	KP 31 F	958.6846
					KP 33 F	958.6850
					KP 40 F	958.6856
					KP 36 (optional)	958.6852
SE 9	956.0205	U	958.6517	U	KP 31 U	958.4848
					KP 36	958.6852
					KP 40	958.6854
					KP 46	958.6858
					KP 56	958.6860
SE 9	955.9193	D	955.9407	D	KP 31 U	958.4848
					KP 36	958.6852
					KP 40	958.6854
					KP 46	958.6858
					KP 56	958.6860
SE 10	957.5171		958.6892		Supporting plate SE 10	958.6832
SQ B 1	10427240		10384853		Support plate SQ	957.6345
SQ B 2	10427425		10384853		Support plate SQ	957.6345
SC 1M	10427240		10427594			
SC 2M	10427425		10427594			



**955.9783**

Sealing profile

SE 9



**956.9069**

Sealing profile

SE 10



**957.7506**

Sealing profile

SC/SQ



**958.5813**

Bushing for Bypass

SC/SQ

# Sliver Condensers



**958.6861**

Condenser

SE 7/8/9

**957.8353**

Condenser

SE 10/SQ

**959.0753**

Condenser

SC

**957.1850**

Sliver guide SC

Diameter 14 mm

**958.3425**

Sliver guide SC

Diameter 10 mm



**10963482**

Condenser yellow

SE 11-20

**10963483**

Condenser

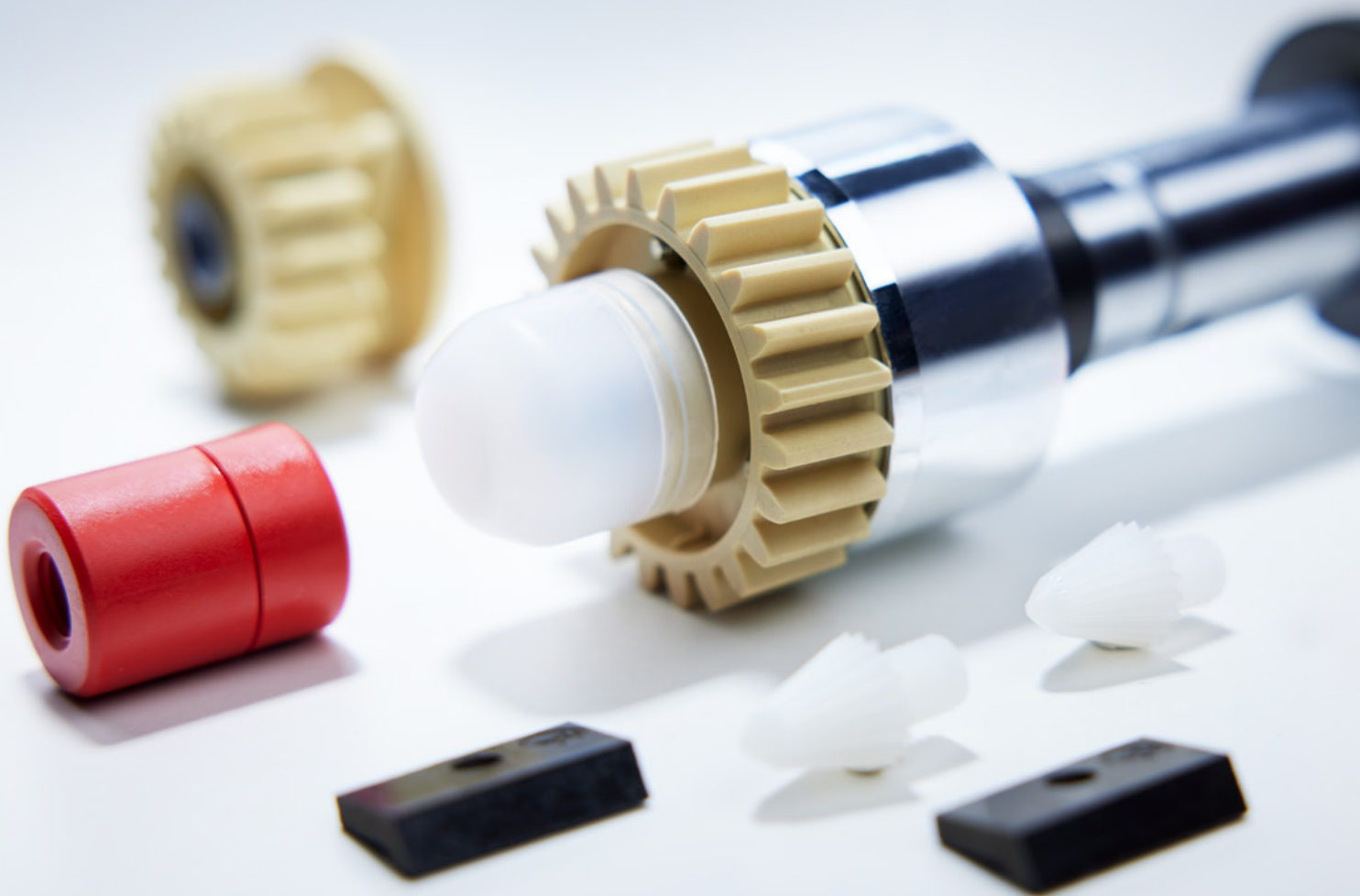
Coarse yarn

SE 11-20





# SpinBox Parts



# Accessories for Opening-Roller Housing



**232.0170**

Cylindrical pin

SE 7/8/9



**10258863**

Cylindrical pin

SE 10/SC/SQ



**953.5536**

Supporting piece

SE 8/9/10/SQ



**954.0911**

Brake spring

SE 9/10/SQ 9



**955.8878**

Locking lever

SE 9



**956.7371**

Locking lever

SE 10



**957.6343**

Locking lever

SQ



**958.5348**

Locking lever

SC



**10976004**

Locking lever

SE 11



**10975970**

Locking lever

SE 11-20



**958.2093**

Eccentric

SC

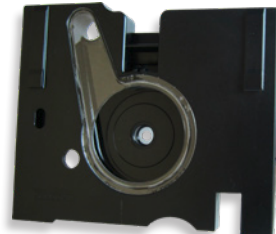


**10258869**

Locking disc

SE 9/10/SC/SQ

# Rotor Housings and Air Seals



<b>955.5125</b>	<b>957.2737</b>	<b>958.3403</b>	<b>958.9376</b>
Rotor housing complete	Rotor housing complete	Rotor housing complete	Rotor housing complete
SE 8	SE 9/10	SQ 8	SQ 9
<b>955.5124</b>	<b>957.2736</b>	<b>958.3404</b>	<b>958.9377</b>
Rotor housing	Rotor housing	Rotor housing	Rotor housing
SE 8	SE 9/10	SQ 8	SQ 9



<b>10153133</b>	<b>10965724</b>	<b>954.1034</b>
Rotor housing complete	Rotor housing complete	Bush rotor housing
SC	SE 11/12	SE 9/12
	<b>10964496</b>	
	Rotor housing	
	SE 11/12	



**953.3895**

**954.1036**

**958.0265**

**953.0738**

Seal collar

Seal collar

Air seal

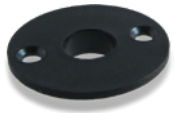
Sealing ring

SE 7/8/SQ 8

SE 9/10/11/12/SQ 9

SC

SE 7/8/9/10/11/12/SC/SQ



**957.0631**

**953.3898**

Rotor seal

Washer

SE 7/8/SQ 8

SE 7/8/SQ 8

# Oil Containers and Seals



**953.8095**

**953.3767**

**954.0362**

**956.8196**

Oil container

Oil container

Sealing ring

Sealing ring

SE 8

SE 9/10

SE 8

SE 9/10



**10975978**

**956.2594**

**10966397**

**952.8511**

Seal

Oil felt, saturated 24 pcs.

Oil felt, saturated 24 pcs.

Seal

SE 11

SE 8/9/10

SE 11

SE 8



**952.8510**

**958.3463**

**957.0297**

**247.0382**

Lid thrust bearing housing

Lid thrust bearing housing

Thrust bearing housing lid

Ball 12 mm

SE 8

SQ 8

SE 9/10/SC/SQ 9

SE 7/8/9/10/11 hybrid

**957.4757**

Thrust bearing housing lid complete

SE 9/10/SC/SQ 9

# Thrust-Bearing Seals



**954.1595**

Thrust-bearing seal

SE 7/8



**953.2873**

Sealing ring

Thrust-bearing seal

SE 7/8



**956.1867**

Thrust-bearing seal

SE 9/10



**953.4408**

Sealing ring

Thrust-bearing seal

SE 9/10



**10976005**

Thrust bearing seal

SE 11



**10998234**

Sealing ring

Thrust-bearing seal

SE 11/12



**10480052**

Adjustment spindle

SE 7/8/SQ 8



**10455566**

Adjustment spindle

SE 9/10/SC/SQ 9

SE 9/10

# ProFiL Cartridge



**10324794**

ProFiL Cartridge

Packing unit 24 pcs.

SE 7/8/SQ 7/SQ 8



**10324795**

ProFiL Cartridge

Packing unit 24 pcs.

SE 9/10/11/12/SC/SQ 9



**10328152**

Thrust-bearing modernization with ProFiL Cartridge

SE 8



**10487815**

Thrust-bearing modernization with ProFiL Cartridge

SE 9/10/11 hybrid

**10582711**

Thrust-bearing modernization with ProFiL Cartridge

SE 11/12 magnetic

# Brake Linings



**955.0132**

Brake pad

SE 8/SQ 8



**10386594**

ProFiL Brake pad

SE 9/10/11/12/SC/SQ 9



**953.9587**

Thin nut

SE 9/10/11/12/SC/SQ 9



**10258837**

Oval head screw M5x12

**225.0088**

Spring ring



**955.4221**

Hang up part

SE 9/10/11/12/SC/SQ 9



**953.6213**

Hang up ring

SE 9/10/11/12/SC/SQ 9



**954.1937**

Roll

SE 9/10/11/12/SC/SQ 9



**957.7527**

Brake spring reinforced

SE 9/10

# Couplings



**956.4823**

Coupling gear

SE 7/8/9



**957.4767**

Coupling gear

SE 10



**10233063**

Coupling gear

SC



**959.0074**

Coupling gear

SQ

# Couplings



**958.6701**

Worm gear

SE 7/8/9/10/SQ



**955.3332**

Worm gear for slub yarn device

SE 7/8/9/10/SQ



**10964831**

Worm gear

SE 11



**957.6524**

Worm gear

SC

**958.6891**

Worm gear complete

SE 7/8/9/10/SQ

**955.3289**

Worm gear for slub yarn device complete

SE 7/8/9/10/SQ

**10145483**

Worm gear complete

SC



**10688971**

Worm gear for slub yarn device, SC



**955.0663**

Armature plate

SE 7/8/9/10/SC/SQ



**289.2718**

Oval head screw



**10964399**

Armature plate, SE 11

**10688960**

Worm gear for slub yarn device complete, SC

**10258843**

Hexagon nut

SE 7/8/9/10/SC/SQ

**10161149**

Screw for plastic, SE 11



**952.3024**

Coupling cone

SE 7/8/9/10/11/12/20



**958.6377**

Coupling cone

SC/SQ



**951.1986**

End cover

SE 7/8/9/10/SC/SQ



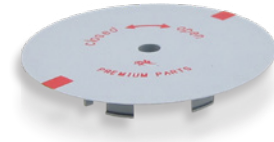
**952.7953**

Washer

SE 7/8/9/10/SC/SQ



## Cover Plates



**952.8839**

Cover plate

SE 7/8

**955.8133**

Cover plate

SE 9

**957.6367**

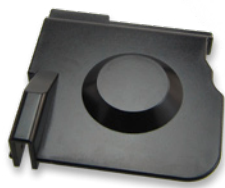
Cover plate

SE 10

**11048238**

End cover grey

SC/SQ



**10974174**

Cover plate yellow

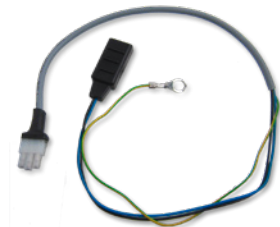
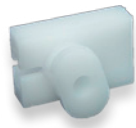
SE 11

**10974176**

Cover plate black

SE 11/12

## Accessories SpinBox



**954.9855**

Guide sleeve

SE 9/10/11/12/SC/SQ 9

**954.9856**

Transfer bushing

SE 9/10/11/12/SC/SQ 9

**958.8494**

Cable duct

SC

**957.9434**

Adapter cable

SC

# Tension Pulleys



**954.1030**

Compensating piece

blue 5 mm

SE 8/SQ 8

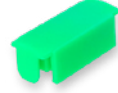


**953.5569**

Compensating piece

red 5 mm

SE 9/10/11/12/SC/SQ 9



**954.8617**

Compensating piece green 7 mm

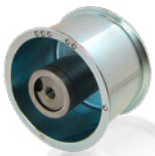
SE 9/10/11/12/SC/SQ 9



**953.4403**

Pressure piece

SE 9/10/11/12/SC/SQ 9



**952.7841**

Tension roller

SE 8 / SQ 8



**10558493**

Tension roller

SE 9 / 10 / 11 / 12 / SQ 9



**957.6280**

Tension roller

SC



**956.2460**

Guide roller

SE 9/10/11/12/SC/SQ 9



**954.5474**

Safety lever

SE 8/SQ 8



**953.3765**

Safety lever

SE 9/10/SC/SQ 9



**10656672**

Energy-saving flat spring

SE 9

# Accessories SpinBox Cover



**11084153**

Press roller

SE 7/8/9/10



**11070933**

Press roller with flange

SC



**11084117**

Press roller without flange

SE 8/9/10



**10756073**

Press roller with flange

SE 7/8/9/10/SC/SQ



**10969873**

Press roller

ACO 312-480



**10783324**

Press roller with support

ACO 312-480



**951.6947**

Opener block

SE 7/8/9/10/SQ



**958.0225**

Opener block

SC



**952.7751**

Bearing bushing left

SE 8/9



**953.2773**

Bearing bushing right

SE 8/9/10



**956.8274**

Bearing bushing left

SE 10



**956.4944**

Swivel pin

SE 10



**953.3146**

Locking roll

SE 8



**955.2920**

Cover plate

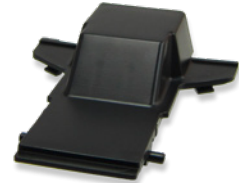
SE 9



**954.9246**

Stud

SE 9



**10975966**

Flap

SE 11/12



**10980541**

Flap

SE 12



**953.8042**

Flat spring

SE 9



**957.4389**

Flat spring

SE 10



**10968791**

Flat spring

SE 11/12/20

# Accessories Worm Gear Shaft



**10555539**

Cover worm short

SC



**10555562**

Cover worm long

SC



**958.4957**

Lid

SC



**958.2096**

Flange

SE 7/8/9/10/SC



**10119501**

Bearing block left

SC



**957.1506**

Bearing block right

SC





# Additional Spare Parts





# Winding Head

## Driving rollers



**958.5298**

Driving roller

SRK to SRZ

- ACO 480



**10778180**

Driving roller SRK

- ACO 480



**10778181**

Driving roller SRZ

- ACO 480



**10966630**

Driving roller Optidrive

SRZ - ACO 480

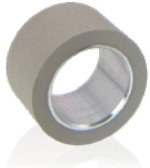
## Take-up rollers



**282.0147**

Take-up roller hard

- ACO 480



**10311532**

Cot hard

- ACO 480



**10965176**

Cap

- ACO 480



**10980570**

Take-up roller hard

ACO 8



**10980567**

Cot hard

ACO 8

## Yarn guides and flange bearings



**289.3862**

Yarn guide

- ACO 312

**10980543**

Yarn guide

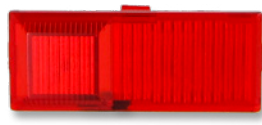
ACO 360, 480

**247.1867**

Flange bearing

- ACO 480

## Covers and lamps



**282.0118**

Signal lamp MFW

ACO 240

**10966327**

Signal lamp

ACO 288 - ACO 480

**286.6366**

Lamp

LC 24V 4W

- ACO 240

**10964445**

Push button

- ACO 480



**10973297**

Pressure spring

- ACO 480

## Housings



**10964815**

Housing

ACO 240



**10979944**

Housing gray

ACO 240



**282.0009**

Housing gray

ACO 288-480



**10979945**

Housing light blue

ACO 288-480



**282.0229**

Cover, light gray

- ACO 480



**10964343**

Lid EFW

ACO 288-480



**282.0232**

Knurled screw

- ACO 480



**282.0139**

Lever EFW

ACO 240-480

## Buttons, forcing levers and accessories



**282.0115**

Forcing lever MFW

- ACO 240



**282.0116**

Forcing lever MFW

- ACO 288



**10966491**

Forcing lever

- ACO 288



**289.3980**

Ball socket Ø 6

- ACO 480



**10964468**

Spherical cap

- ACO 480



**10973982**

Cap

- ACO 288



**10964467**

Lift bow

- ACO 480

## Additional components



**958.2618**

Shock absorber

SE 7/8/9/10



**289.3969**

Dampening cylinder

- ACO 480



**10964337**

Clamping plate

- ACO 480



**958.7953**

Retraction lever

- ACO 480

**10503703**

Shock absorber

SE 11/12



**10957365**

Eccenter bolt

- ACO 480



**10964394**

Detention pawl

- ACO 480



**10964887**

Roll

- ACO 480



**10972398**

Guide piece

- ACO 480



**247.1878**

Self-aligning ball bearing

- ACO 288



**10957345**

Roll

- ACO 480



**289.3911**

Gearwheel

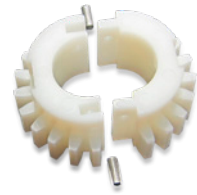
- ACO 480



**10964498**

Grooved pin, plastic 3x32

- ACO 480



**10976006**

Gearwheel two-piece

- ACO 480

## Guide sheets and collecting trays



**289.3977**

Guide sheet SRZ

ACO 240 - ACO 288



**282.0049**

Guide sheet SRK

ACO 240 - ACO 288



**282.0207**

Collecting tray MFW

- ACO 288



**289.3979**

Collecting tray EFW

- ACO 288



**289.3978**

Driving belt

- ACO 480



**10965223**

O-Ring

- ACO 480

## Adapter plates



**289.0932**

Grooved ball bearing

adapter plate - ACO 480



**10973979**

Protective disk

- ACO 480



**10968059**

Screw M 5x10



**282.0320**

Adapter plate SRZ

- ACO 288



**289.4166**

Adapter plate SRZ

- ACO 288



**10957455**

Adapter plate slit SRZ

ACO 312, 360, 480



**10957572**

Adapter plate SRZ

ACO 312, 360, 480



## Springs



**289.3993**

Pressure spring

- ACO 480



**289.3983**

Pressure spring

- ACO 480



**10973228**

Leg spring

- ACO 480



**10973251**

Leg spring

- ACO 480



**10973256**

Leg spring

- ACO 480



**10973236**

Leg spring

- ACO 480



**10973305**

Pressure spring

- ACO 480

# Piecer Carriage, Coromat, DCU

## Additional components cleaning head



**958.5432**

O-Ring holder

Piecer carriage/Coromat



**958.5431**

Intermediate piece

Piecer carriage/Coromat



**294.0395**

O-Ring 10x6.5

Piecer carriage/Coromat



**10973984**

O-Ring

DCU



**289.4195**

Scraper

Piecer carriage/Coromat/DCU



**10964433**

Scraper, steel

Piecer carriage/Coromat/DCU

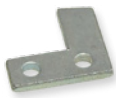


**289.4063**

Scraper straight RK3

Piecer carriage/Coromat

for rotors  $\leq 34$  mm



**10969852**

Plate

Piecer carriage/Coromat



**958.5303**

Locking spring

Piecer carriage/Coromat/DCU



**958.5059**

Brush

Piecer carriage/Coromat

## Other additional components



**282.0437**

Thread laying roll

Piecer carriage/Coromat



**958.5732**

Thread laying roll small

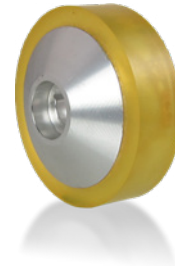
Piecer carriage/Coromat



**10964369**

Driving roll

SRZ, Piecer carriage



**10964318**

Driving roll

SRK, Piecer carriage



**958.6296**

Yarn transport

Piecer carriage



**958.8055**

Scissors

Piecer carriage/Coromat



**10965152**

Roll, 6000-2Z

ACO 240, ACO 288, ACO 8



**10909028**

Light barrier laser



**958.8004**

Coupling cone

Piecer carriage



**10964977**

Coupling cone

Coromat



**247.0390**

Deep-groove ball bearing 608-2RS

Piecer carriage



**10704728**

Deep-groove ball bearing 625-2ZC3

Piecer carriage/Coromat



**959.2086**

Support lever

Piecer carriage



**10964489**

Yarn guide bow

Piecer carriage/Coromat



**10964486**

Slide ring

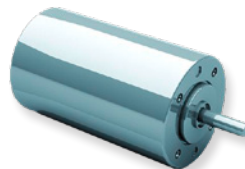
Coromat



**289.4115**

Bearing bushing

Piecer carriage/Coromat



**10968933**

Motor DC 22 V

Feeder arm

# Machine Components



**10968216**

Thermal printer paper

58 mm



**289.3582**

Coupling BSD-Omega

ACO 240-288



**10965094**

Butterfly valve, doffer

- ACO 288



**10965008**

Butterfly valve

Piecer carriage



**10972444**

Butterfly valve blue

Coromat

# Trash Removal Belts

## SE 8

Width [mm]	Length [mm]	Positions	Part No.
40	31.675	120	*
40	37.305	144	11153641
40	42.935	168	11151617
40	48.570	192	*
40	54.195	216	11153618

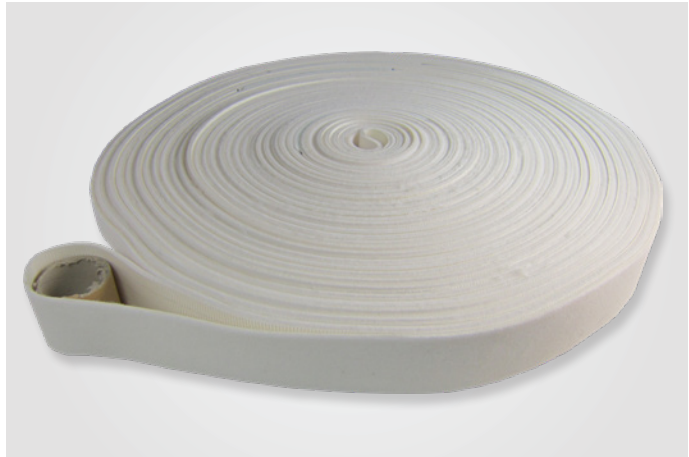
## SE 9/10

Width [mm]	Length [mm]	Positions	Part No.
59	35.260	144	10980273
59	40.860	168	10980274
59	46.460	192	10980299
59	52.060	216	10980275
59	57.660	240	10980277
59	63.270	264	10980300
59	68.870	288	10846344

## SE 11/12

Width [mm]	Length [mm]	Positions	Part No.
115	46.682	192	11156021
115	52.269	216	11269940
115	57.857	240	*
115	63.444	264	11140852
115	69.031	288	10846343
115	74.619	312	10846341
115	80.207	336	*
115	85.793	360	10846345
115	91.380	384	*
115	96.968	408	10980278
115	102.555	432	*
115	108.143	456	*
115	113.730	480	10980280

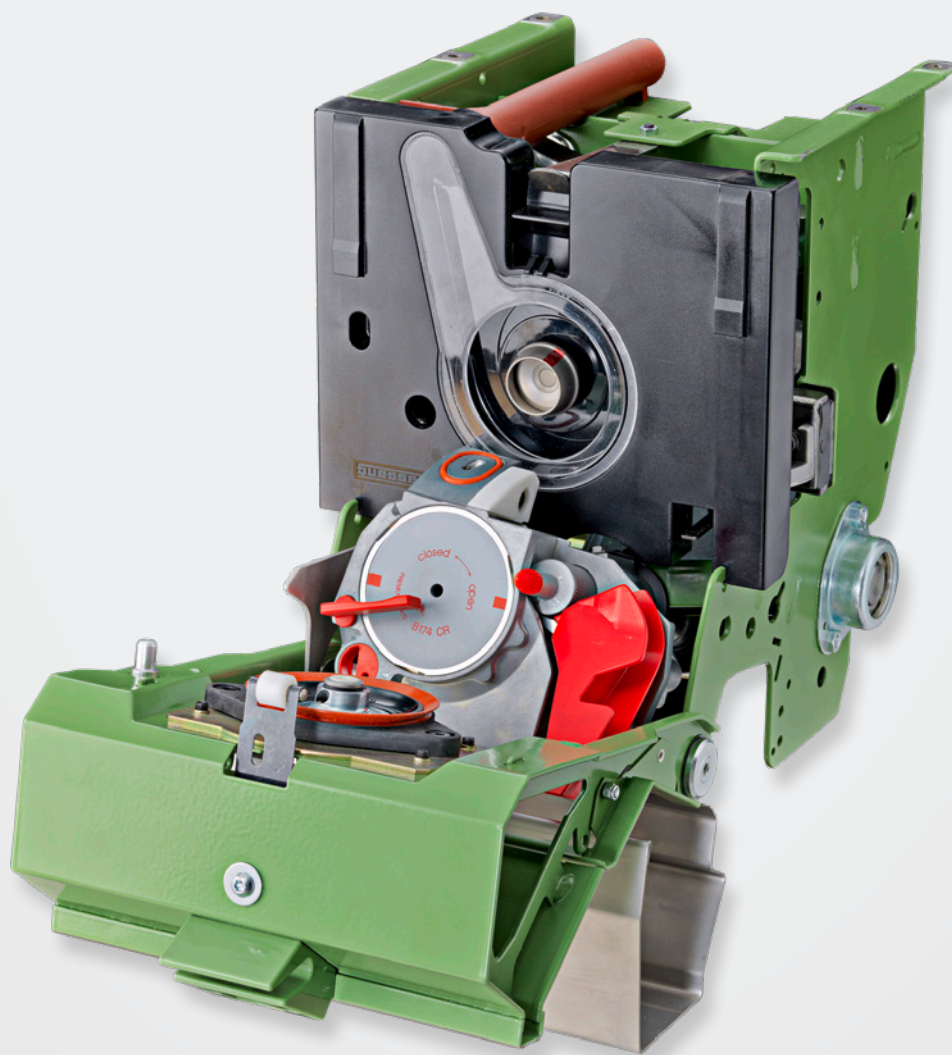
\* Available on demand



## SE 20 ACO 8/9

Width [mm]	Length [mm]	Positions	Part No.
100	47.076	192	*
100	52.664	216	*
100	58.251	240	*
100	63.839	264	*
100	69.427	288	*
100	75.014	312	10980291
100	80.602	336	*
100	86.190	360	10980296
100	91.777	384	*
100	97.365	408	10980297
100	102.953	432	*
100	108.540	456	*
100	114.128	480	10980298
100	119.487	504	*
100	125.055	528	*
100	130.632	552	*
100	136.208	576	*
100	141.785	600	*

# Partial Modernization





# ShockAbsorber

Insufficient shock absorbing properties of the package cradle system is often the cause of oval package build-up. This has a particularly negative effect when synthetic and viscose fibres are processed, and at high delivery speeds.

An oval package build-up is associated with numerous side effects:

- „Bouncing“ packages lead to irregular package density (see R.H. Fig. above).
- Packages with a high degree of bouncing are temporarily no longer driven – the yarn forms crinkles on the packages.
- Incorrect length measuring with diameter-related doffing
- Problems with the piecer carriage in finding the upper yarn layer – reduced machine efficiency
- Variable winding tensions and thus deterioration of yarn quality (yarn elongation)
- In case of low winding tension due to shock absorption unreliable functioning of mechanical yarn detectors
- Displaced yarn layers and inexact yarn traverse result in take-off interruptions in subsequent processes (e.g. warping)

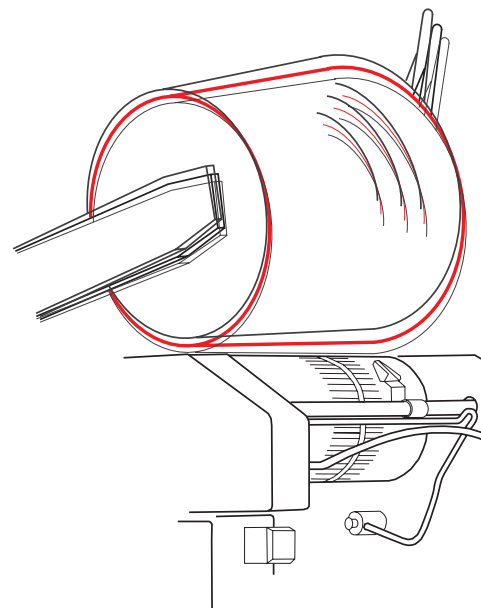
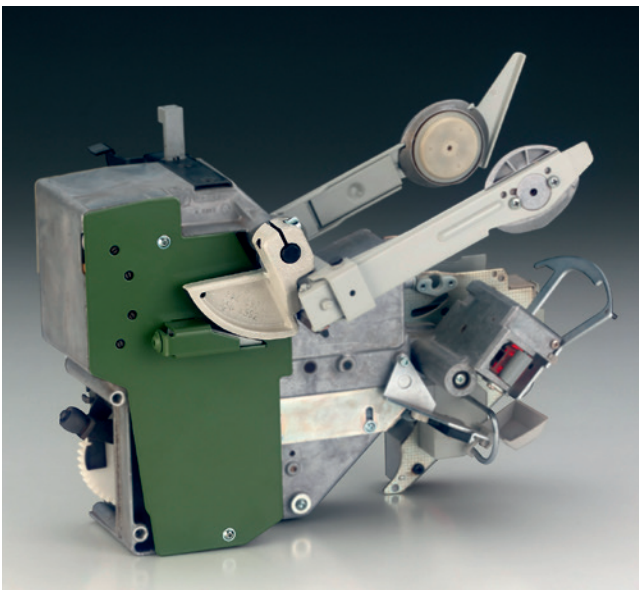
The SUESSEN ShockAbsorber cushions shocks with a wedge and a pressure spring, which is pressed exactly against the

fixing arm of the package cradle. This ensures a uniform package build-up with constant winding tension and therefore eliminates all problems caused by oval package build-up.

## The SUESSEN ShockAbsorber offers the following additional benefits:

- Can be fitted quickly on the machine (within about 10 minutes) – the winding unit need not be dismantled, the old hydraulic shock absorber may remain in the winding unit.
- Functions absolutely free from play
- Does not require any oil
- Does not require any maintenance
- It can be retrofitted either to complete machines or just to individual winding heads.
- Due to the higher machine efficiency the ShockAbsorber has a very short payback period.

The SUESSEN ShockAbsorber is available for all Autocoro machines with SE 7 to SE 12 SpinBox.



Part No.	Description	SpinBox type	Positions
958.2618	ShockAbsorber	SE 7/8/9/10	1
959.5814	ShockAbsorber	SE 7/8/9/10	120
959.4792	ShockAbsorber	SE 7/8/9/10	144
958.7472	ShockAbsorber	SE 7/8/9/10	168
958.7473	ShockAbsorber	SE 7/8/9/10	192
958.6314	ShockAbsorber	SE 7/8/9/10	216
958.9470	ShockAbsorber	SE 7/8/9/10	240
10144709	ShockAbsorber	SE 7/8/9/10	288
10503703	ShockAbsorber	SE 11 / 12	1
10588191	ShockAbsorber	SE 11/12	144
available on demand	ShockAbsorber	SE 11/12	168
available on demand	ShockAbsorber	SE 11/12	192
available on demand	ShockAbsorber	SE 11/12	216
available on demand	ShockAbsorber	SE 11/12	240
available on demand	ShockAbsorber	SE 11/12	288
available on demand	ShockAbsorber	SE 11/12	312
available on demand	ShockAbsorber	SE 11/12	360

## Spare parts ShockAbsorber



**958.2618**

ShockAbsorber

SE 7/8/9/10



**958.4584**

Cover auxiliary shaft

SE 7/8/9/10/11/12/SC/SQ



**289.3779**

Pressure spring



**958.6259**

Wedge

**10503703**

ShockAbsorber

SE 11/12

# Thrust-Bearing Modernization with *ProFiL* Cartridge

The SUESSEN *ProFiL* Cartridge is a rotor bearing without oil emission.

This device avoids the disadvantages of the oil-lubricated thrust ball bearing like oil emission within the SpinBox, blockage of rotors due to oil-contaminated fly, high cleaning and maintenance costs by short maintenance intervals.

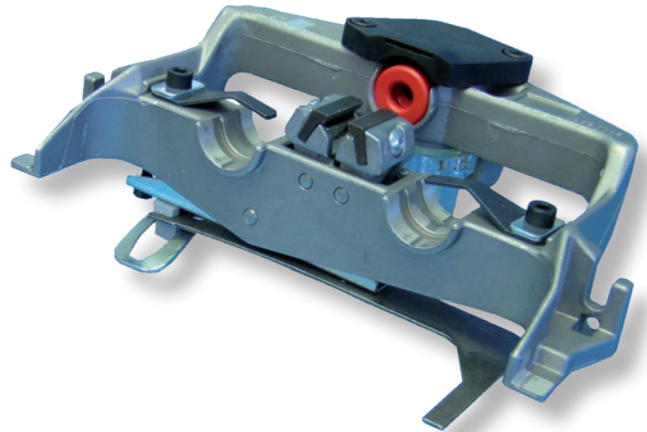
The advantages of the *ProFiL* Cartridge like:

- maintenance-free operation
- avoiding of oil leakages and emission of oil mist within the SpinBox, therefore substantial increase of cleaning intervals, which can at least be doubled
- definitely reduced cleaning costs
- no blockage of rotors due to oil-contaminated fly with consequential damages
- no oil changes at the thrust bearing
- clean feed roller drives providing constant driving torques
- accurate axial support of the rotor with steel ball

ensure a short payback period of the conversion.

The package comprises the following components:

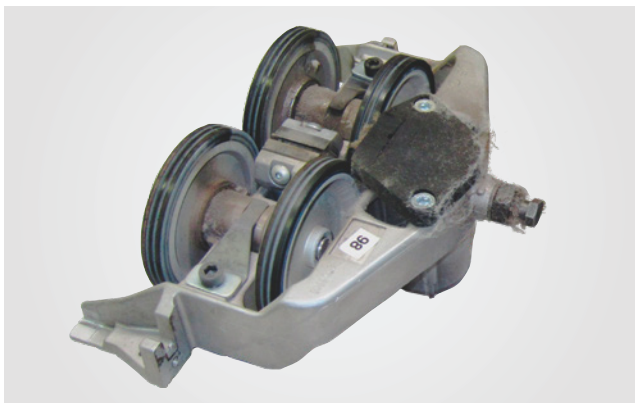
- *ProFiL* Cartridge
- new or reworked TwinDisc bearing unit, including new brake pads, connecting ring and connecting piece
- special setting screw.



The new bearing unit can be easily fitted, just the axial rotor position must be adjusted. Only rotors with ceramic pin ensure the function of the *ProFiL* Cartridge.

A complete replacement of the TwinDisc bearing unit is not imperative. The existing unit can be reworked. Please contact us, if you are interested.

The SUESSEN *ProFiL* Cartridge is available for SpinBoxes SE 7/8/9/10/11/12/SC/SQ.



Comparison of bearing with *ProFiL* Cartridge (left) with oil-lubricated bearing (right) after 8 weeks of application spinning 100 % cotton, Ne 24 at 120 000 rpm on the same machine

Part No.	Description	SpinBox type
10328152	Thrust Bearing modernization with <i>ProFiL</i> Cartridge	SE 8
10487815	Thrust Bearing modernization with <i>ProFiL</i> Cartridge	SE 9/10/11 hybrid
10582711	Thrust Bearing modernization with <i>ProFiL</i> Cartridge	SE 11/12 magnetic

Part No.	Description	SpinBox type
959.2194	Thrust Bearing modernization with <i>ProFiL</i> Cartridge and TwinDisc	SE 8
958.6398	Thrust Bearing modernization with <i>ProFiL</i> Cartridge and TwinDisc	SE 9/10/11 hybrid

## Spare parts thrust bearing modernization



<b>10324794</b>	<b>10324795</b>	<b>10328152</b>	<b>10487815</b>
<i>ProFiL</i> Cartridge	<i>ProFiL</i> Cartridge	Thrust-bearing modernization with <i>ProFiL</i> Cartridge	Thrust-bearing modernization with <i>ProFiL</i> Cartridge
Packing unit 24 pcs. SE 7/8/SQ 7/SQ 8	Packing unit 24 pcs. SE 9/10/11/12/SC/SQ 9	SE 8	SE 9/10/11 hybrid
			<b>10582711</b>
			Thrust-bearing modernization with <i>ProFiL</i> Cartridge
			SE 11/12 magnetic

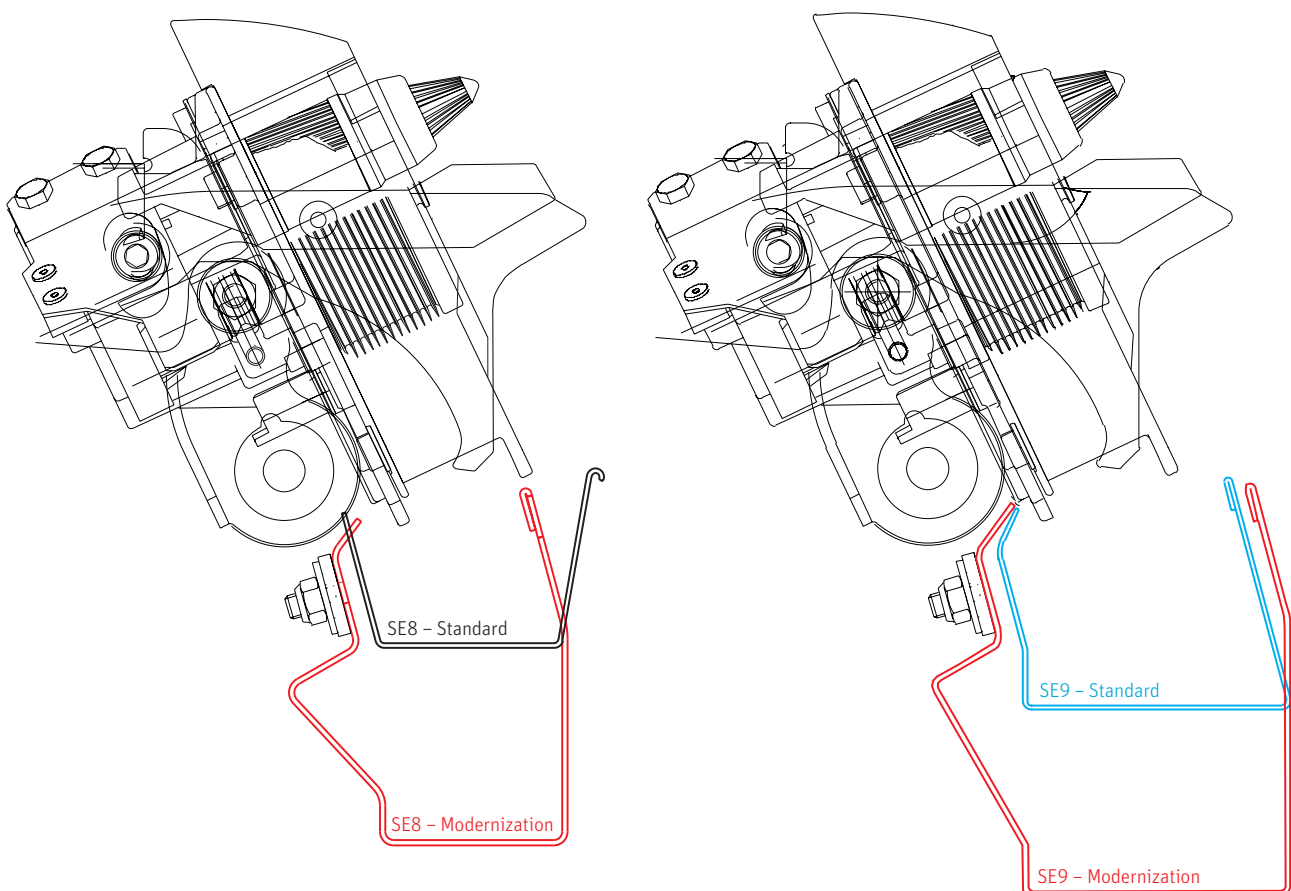
# TrashChannel Modernization

On machines with a high degree of trash extraction, the standard trash removal system is often not sufficient. Due to the narrow dimensions of the standard trash channel, the already extracted trash gets into air turbulences. When it re-enters the SpinBox, it contaminates the spinning unit causing yarn-clearer cuts and yarn breaks. Furthermore, the basically parallel walls of the standard trash channel support the formation of the so-called “lint-rolls”, which worsen the a.m. contamination of the spinning units.

The trash channel of the Premium Parts TrashChannel modernization has an increased depth – known from the SUESSEN SweepCat system – ensuring a safe removal of the extracted trash out of the range of air turbulences. The bend of the back wall prevents the formation of any lint-rolls, so that the contamination of the spinning units is reduced and results in:

- up to 25% less yarn-clearer cuts
- up to 50% less end-breaks
- up to 4% increase in machine efficiency

Considering these results, the pay-back period is up to one year only for most applications.



In fact, the only component to be replaced is the trash channel. The complete drive system of the trash conveyor belts is reused as well as the conveyor belts themselves. Consequently maintenance, settings and spare parts of the trash removal system remain the same. This is very comfortable for your spare parts stock and the maintenance personnel.

The TrashChannel modernization Package is available for SpinBox SE 8/9 on ACO Standard to 288 (SE 10 on demand).

Part No.	Description	SpinBox type	Positions
available on demand	TrashChannel modernization	SE 8/SQ 8	144
available on demand	TrashChannel modernization	SE 8/SQ 8	168
11043778	TrashChannel modernization	SE 8/SQ 8	192
11043854	TrashChannel modernization	SE 8/SQ 8	216
available on demand	TrashChannel modernization	SE 8/SQ 8	240
available on demand	TrashChannel modernization	SE 9/SQ 9	144
10738849	TrashChannel modernization	SE 9/SQ 9	168
10571081	TrashChannel modernization	SE 9/SQ 9	192
10738846	TrashChannel modernization	SE 9/SQ 9	216
10523591	TrashChannel modernization	SE 9/SQ 9	240
10595655	TrashChannel modernization	SE 9/SQ 9	264
10454589	TrashChannel modernization	SE 9/SQ 9	288





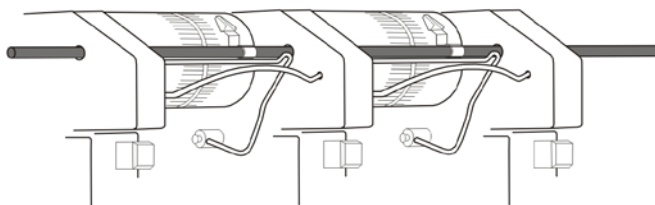
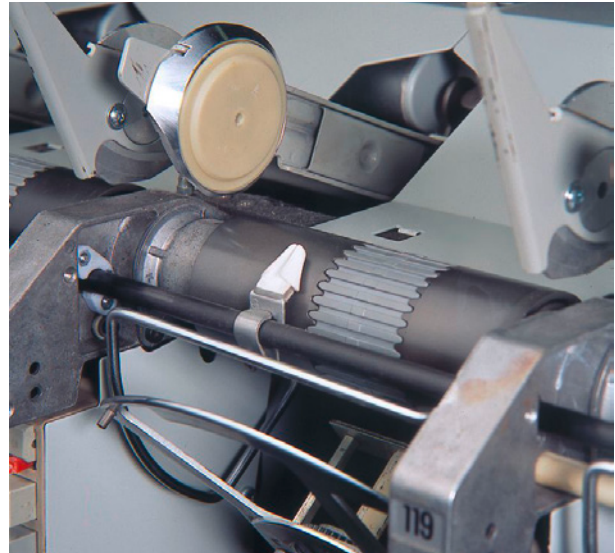
# Carbon-Fibre Rod Modernization

The performance of rotor spinning machines is often limited by the physical characteristics of the yarn-guide rod as well as of the central gear (traverse gear located in the headstock). The limiting factors are, in particular, gear load and deformation (extension/up-setting) of the traverse rod.

Employing a carbon-fibre rod can lead to increased performance in rotor spinning machines, without changing the existing drive components. (See table 1)

The carbon-fibre rod is made of a high-performance material 5 times lighter than steel and with equal stability characteristics. Stress reduction in the traverse gear is about 50%.

The carbon-fibre rod is available for SRK and SRZ traverse gearing up to ACO 240.



Spinning positions	ACO-Take up speed original machine						SUESSEN Carbon-Fibre Rod	
	Steel rod with plain bearings		Steel rod with roller bearings		Steel-coated CFRP rod with roller bearing		Central traverse gear	
	SRZ	SRK	SRZ	SRK	SRZ	SRK	SRZ	SRK
288	-	-	142	112	172	142	-	-
264	-	-	152	122	172	142	-	-
240	-	-	162	132	182	152	200	180
216	132	112	172	142	182	152	210	190
192	142	112	182	152	192	162	220	202
	for cross-wound angle 30°		at 33° minus 12 m/min at 35° minus 18 m/min at 39° minus 24 m/min				for crosswound angle 30° at 33° x 0,91 at 35° x 0,86 at 39° x 0,77	

Table 1



Part No.	Description	ACO type	Positions
10324284	Carbon-Fibre Rod Modernization	- ACO 240	168
10324286	Carbon-Fibre Rod Modernization	- ACO 240	192
10284771	Carbon-Fibre Rod Modernization	- ACO 240	216
10324287	Carbon-Fibre Rod Modernization	- ACO 240	240

## Spare parts CFK yarn guide rod



**10213467**

Guide

Yarn-guide rod



**958.5413**

Coupling

Yarn-guide rod



**10284776**

Coupling

Yarn-guide rod



**282.0018**

Holder



**958.0386**

Yarn-guide rod

2808 mm

**958.0983**

Yarn-guide rod

3040 mm

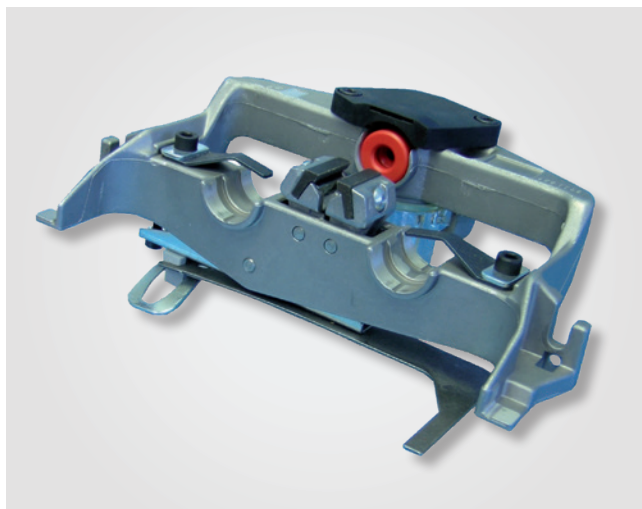
# SE 9 Performance Kit

Plenty of Autocoro SE 9 machines are still in industrial use for various yarn applications. Especially for these machines SUESSEN has tied a package to improve the performance of the machines with regard to:

- reduce the energy consumption
- reduce the down time and labor during a maintenance
- increase the lapse of time between maintenance work
- and increase lifespan of individual components.

**The Performance Kit contains:**

- the EC bearing unit with the *ProFiL* Cartridge
- *ProFiL* Rotor Brake Pads
- reinforced brake spring
- and a new flat spring for the contact roller suspension



## Increase life-span for brake-pads

The new TwinDisc bearing unit is equipped with a so-called reinforced brake spring. This new spring transmits 20% more force to the brake assembly, which results in a shorter stop time of the rotors (see Fig. 1). The wear for the specific num-

ber of brake actions is the same, but the increased brake force permits to use the same brake pad for 50% more the number of braking events. Meaning, the brake pads can be worn down further without degrading their performance.

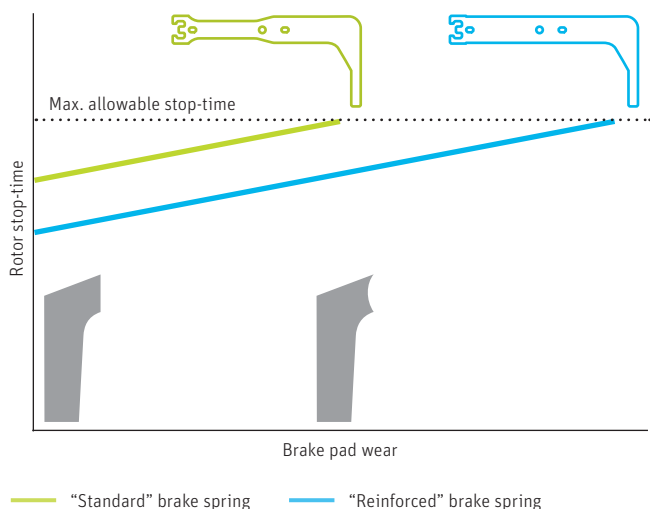


Fig. 1

The Performance Kit for Autocoro SE 9 machines reduces the power consumption of the TwinDisc bearing unit on average by 19% along with the benefits of extended cleaning cycles, less down time during cleaning and more lifespan for the brake pads. This package does not require any service technician of the supplier and can be easily installed by the technicians of the spinning mill. The savings of energy and down time add up to a payback period within one year.

Naturally, the components of the SE 9 Performance Kit are also available separately.

## Reduced down time

Another substantial benefit of the Performance Kit is the reduction of the down time during a cleaning cycle. The *ProFiL* Cartridge is an already known grease cartridge which eliminates any oil mist released to the bearing unit. Accordingly fluff and dust do not adhere to the TwinDisc bearing unit as in the case of standard oil-thrust bearings. Fluff and dust simply fall onto the belly pans and can be easily removed; customers' practical experience proves that, due to this advantage, the down time during a cleaning cycle is significantly reduced by at least 25%. The installation of the EC bearing unit only requires the standard adjustment for axial positioning of the rotor at the first assembly.

## Reduced energy consumption

The actually consumed power of the SE 9 TwinDisc bearing unit varies, conforming to the rotor speed, between 75 W at 100 000 rpm and 115 W at 135 000 rpm (see grey line in Fig. 2). For a 288 unit machine at say 120 000 rotor rpm this means a total power consumption of about 97 W/unit  $\hat{=}$  28 kWh – only for the TwinDisc drive.

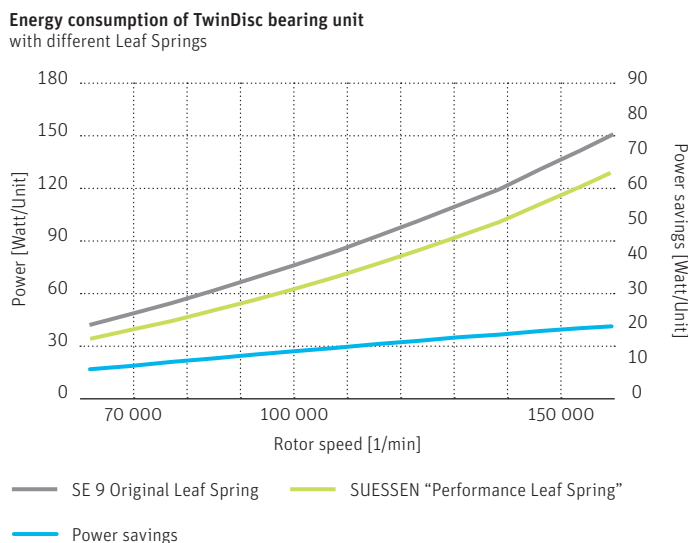


Fig. 2

## Extended lapse of time for maintenance

Since the fluff and dust do not adhere to the TwinDisc bearing unit, the necessary cleaning cycles are extended considerably. Most customers report that they could extend the cleaning cycles by at least 50%.



The new flat spring of the Performance Kit reduces the load to the contact roller suspension and thereby achieves energy savings up to 18% to 20% (depending on the rotor speed – see light-green line in Fig. 2).

This results in about 16 W/unit  $\hat{=}$  4.6 kWh less power consumption for the same a.m. example machine (see light blue line in Fig. 2).

The assembly of the new flat spring does not require any new setting to the spring bracket, thus it can be easily mounted in the spinning mill.

# SE 9 Performance Kit

Part No.	Description	SpinBox type
10733020	Performance Kit complete	SE 9

## Spare parts SE 9 performance kit



<b>10487815</b>	<b>10386594</b>	<b>10656672</b>	<b>957.7527</b>
Thrust-bearing modernization with <i>ProFiL</i> Cartridge	<i>ProFiL</i> Brake pad	Energy-saving flat spring	Brake spring reinforced
SE 9/10/11 hybrid	SE 9/10/11/12/SC/SQ 9	SE 9	SE 9/10

# Tools and Accessories



# Axial Rotor Position



**951.5217**

Scanning caliber complete

SE 7/8/9/10/11/12

**957.8242**

Scanning caliber complete

SC/SQ

**954.0589**

Setting gauge

SE 7/8

**954.1399**

Setting gauge

SE 9

**289.0496**

Dial gauge

**289.0496**

Dial gauge

**954.2004**

Scanning caliber

SE 7/8/9/10/11/12

**957.8241**

Scanning caliber

SC/SQ



**957.2358**

Setting gauge

SE 10/SE 11 (hybrid)/SC/SQ

**959.1420**

Setting gauge

SQ 7/8

**954.0590**

Setting sleeve

SE 7/8/SQ 7/8

**11016766**

Setting gauge magnet

SE 11-12

# Centring of Channel Plate



<b>954.1133</b>	<b>954.1406</b>	<b>954.1134</b>	<b>957.5227</b>
Centring gauge	Centring gauge	Centring cone	Centring cone
SE 7/8/SQ 7/8	SE 9/10/SQ 9	SE 7/8/9	SE 10/SQ



<b>957.6469</b>
Setting gauge for opening unit
SE 7/8/9/10/SC/SQ

# TwinDisc Maintenance



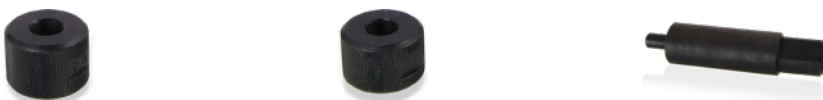
<b>10658890</b>	<b>10637156</b>	<b>955.5589</b>
TwinDisc lubricating device	Base plate	TwinDisc fitting tool
complete	Lubricating device	complete
SE 7/8/9/10/11/12/SC/SQ	SE 7/8/9/10/11/12/SC/SQ	SE 7/8/9/10/11/12/SC/SQ

<b>954.6279</b>	<b>954.3169</b>
Grease gun	Bush



<b>954.3635</b>	<b>954.3636</b>	<b>10670979</b>	<b>956.9273</b>
Distance disk	Distance disk	Distance disk for	Pressure piece
SE 8/SQ 8	SE 9/10/11/12/SC/SQ	convex TwinDisc	SE 7/SQ 7
		SE 9/10/11/12	



<b>956.9274</b>	<b>956.9275</b>	<b>954.3649</b>
Pressure piece	Pressure piece	Stud
SE 8/SQ 8	SE 9/10/11/12/SC/SQ 9	SE 7/8/9/10/11/12/SC/SQ



# Thrust-Bearing Unit



**954.1997**

**958.4661**

**955.2286**

**954.7588**

Setting gauge 8.0

Setting gauge 8.3

Wedge for brake spring

Adjusting device brake

SE 9-12/SC/SQ

SE 9-12

SE 9/10/SC/SQ 9

SE 9/10/SC/SQ

for hybrid bearing

for magnetic bearing



**956.5830**

**954.0591**

**954.0592**

**953.9200**

Mounting device

Tool oil container

Little hook for reflector

Centring gauge for thrust bearing housing

TwinDisc thrust bearing unit

SE 7/8/9/10/SC/SQ

SE 7/8/9/10/SC/SQ

SE 7/8/SQ 7/8

SE 9/10/11/12/SC/SQ

# Winding Head



**958.6145**

Setting gauge for yarn guide

SE 7/8/9/10/11/12/SC/SQ

**959.1302**

Fitting pliers

Carbon-fibre traverse rod

SE 9/10/SC/SQ

**958.4595**

Assembly mandrel

SUESSEN ShockAbsorber

# Special Tools



<b>10231133</b>	<b>10555212</b>	<b>954.1394</b>	<b>954.3648</b>
Clamping device for opening roller	Vacuum gauge complete	Mounting tool Torque Stop	Tool for navel
SE 8/9/10/11/12/SC/SQ		SE 9/10/SC/SQ	SE 7/8/9

**10554477**

Hose

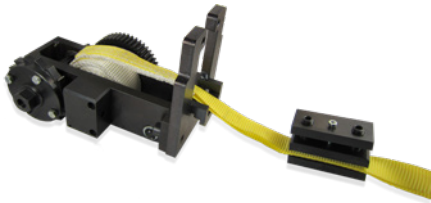


<b>957.5688</b>	<b>959.3086</b>	<b>958.3503</b>	<b>10266390</b>
Mounting tool for navel	Mounting tool Bypass SC/SQ	Tool for locking lever	Mounting tool for opening roller
SE 10/11/12/SC/SQ		SC/SQ	SC/SQ



<b>958.5741</b>	<b>954.0593</b>	<b>954.1995</b>
Rotor for adjustment	Key for press roller suspension	Eccentric key
Piecer carriage	SE 7/8/9/10/11/12/SC/SQ	SE 9/10/11/12/SC/SQ 9
SE 9/10/SC/SQ 9		

# Special Tools



**957.9940**

Installation device tangential belt rotor

SE 7/8/9/10/11/12/SC/SQ



**957.8310**

Clamping mechanism

for installation device tangential belt rotor

SE 7/8/9/10/11/12/SC/SQ



**289.4162**

Tool for feed

SE 7/8/9/10/11/12/SC/SQ

**957.9959**

Belt



**958.5050**

Tool clearer SC



**959.2435**

Flanged bolt SQ



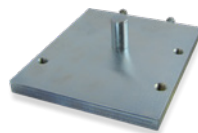
**959.2437**

Draw-off screw SQ



**289.4203**

Press



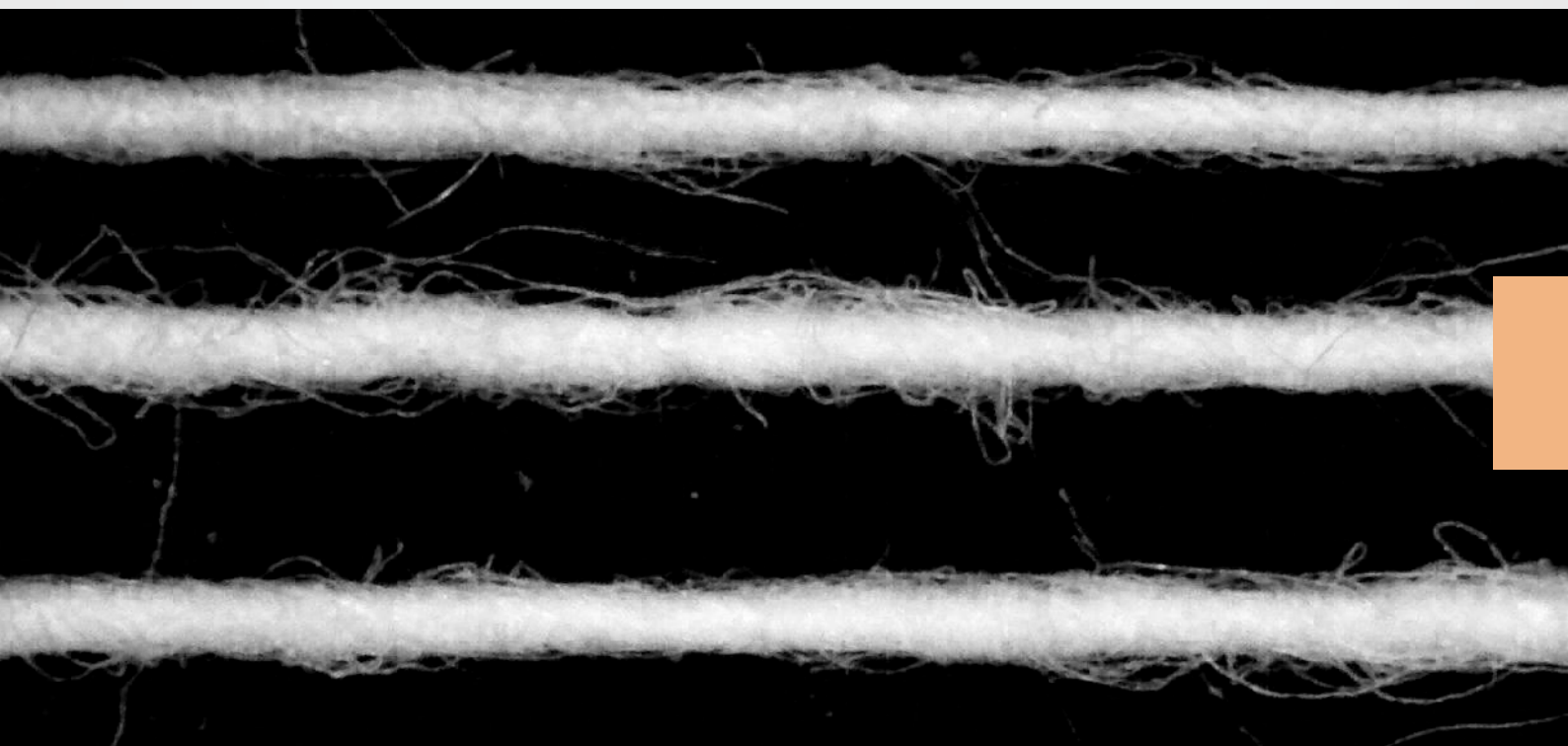
**959.2525**

Supporting plate complete

**959.2439**

Press with supporting plate

# Recommended Spinning Accessories



# Survey According to Applications

The selection of spinning components mainly depends on the application and the fibre material to be processed. The specially required yarn characteristics can be optimized by certain variants.

The following charts show the generally used spinning components for different fibre materials and applications. They can be further specified as a result of the more detailed descriptions in the chapters to follow.

## Cotton

	<b>Knitting yarn</b>	<b>Weaving yarn standard</b>	<b>Denim yarn</b>
<b>Spinning component</b>	<b>Type</b>		
<b>Rotor</b>	G	T	TC
	GSQ	K	U
	S		S
<b>SOLIDRING</b>	B 174	B 174	B 174
	B 20	B 20	
	High speed	<i>ProFiL S</i> <i>ProFiL 6</i> <i>ProFiL SM</i>	<i>ProFiL S</i>
	<b>Navel</b>	Normal speed	KN4
KN8			
KS M			
KS R4			
KS 2R4			
KN4 R4			
KN4 2R4			
KN8 R4			
<b>Torque Stop</b>	Clip white	Clip white	Clip green
	Clip black	Clip red	

## Blends like PES/cotton

	<b>Knitting yarn</b>	<b>Weaving yarn standard</b>	<b>Denim yarn</b>
<b>Spinning component</b>	<b>Type</b>		
<b>Rotor</b>	G	T	TC
	S		U
			S
<b>SOLIDRING</b>	S 21	S 21	S 21
	S 25		S 25
<b>Navel</b>	High speed	MIMA 2	<i>ProFiL 4</i>
	Normal speed	MIMA 1	KN3 KN4
<b>Torque Stop</b>	Clip white	Clip white	Clip green
	Clip red	Clip red	

## Regenerates

	Knitting yarn	Weaving yarn standard	Denim yarn
Spinning component	Type		
<b>Rotor</b>	TC S	T TC	TC U S
<b>SOLIDRING</b>	S 21 S 25	S 21 S 25	S 21 S 25
	High speed		
<b>Navel</b>	KN4 KN8 KS M KS R4 KS 2R4 KN4 R4 KN4 2R4 KN8 R4	KS KN4 KN8 KS M	KS KN KN3 KN4
<b>Torque Stop</b>	Clip white	Clip white	Clip white Clip green

## Viscose

	Knitting yarn	Weaving yarn standard
Spinning component	Type	
<b>Rotor</b>	T T and K with B5 G	T T and K with B5 K
<b>SOLIDRING</b>	B 174 B 187	B 174 B 187
<b>Navel</b>	High speed Normal speed	<i>ProFiL 4</i> MIMA 2 <i>ProFiL S</i> <i>ProFiL 4</i> <i>ProFiL SM</i>
<b>Torque Stop</b>	Clip white Clip red	Clip red Clip green





## Polyester/acrylic

	Knitting yarn	Weaving yarn standard	Denim yarn
Spinning component	Type		
<b>Rotor</b>	G S	T TC	TC U S V
<b>SOLIDRING</b>	S 21 S 25 S 43-3,6	S 21 S 25 S 43-3,6	S 21 S 25
<b>Navel</b>	High speed Normal speed	MIMA 2 MIMA 1	MIMA 2 MIMA 1
<b>Torque Stop</b>	Clip red Clip green	Clip red Clip green	Clip red Clip green


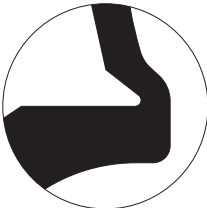


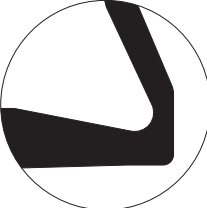


# Rotors

## Rotor characteristics


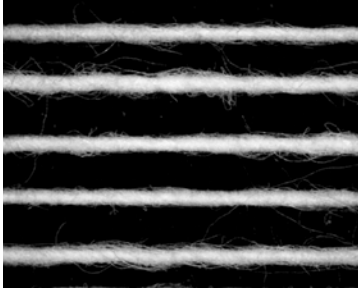

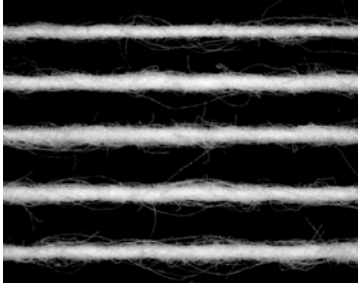
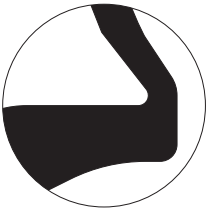
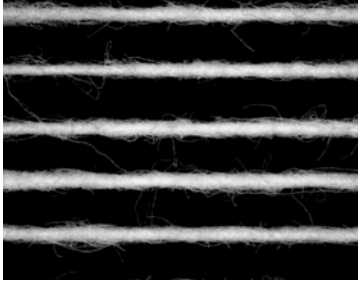
Rotor Type	Characteristics	Knitting yarn	Weaving yarn standard	Denim yarn	Cotton	Blends like PES/cotton	Regenerated fibres	Viscose	PES/PAC
T	 <ul style="list-style-type: none"> <li>• universally applicable</li> <li>• good yarn values</li> <li>• for smooth yarns</li> <li>• no tendency to random point-like contamination of the rotor groove</li> <li>• less moiré faults</li> <li>• compact yarn</li> <li>• high yarn strength</li> </ul>	○	●	○	●	●	●	●	●
T and K with B5	 <ul style="list-style-type: none"> <li>• preferably Ne 20 and finer</li> <li>• compact yarn</li> <li>• for smooth yarns</li> </ul>	●	●					●	
TC	 <ul style="list-style-type: none"> <li>• preferably Ne 10 and coarser</li> <li>• for denim yarns</li> <li>• in case of regenerates also for knitting and weaving yarns</li> <li>• high-bulk yarns</li> <li>• other coarse yarns</li> <li>• good yarn values</li> <li>• good spinning stability</li> <li>• no tendency to random point-like contamination of the rotor groove,</li> <li>• less moiré faults</li> <li>• compact yarns</li> <li>• better effect in case of fancy yarn equipment</li> </ul>	○	○	●	●	●	●		●
G	 <ul style="list-style-type: none"> <li>• universally applicable</li> <li>• very good spinning stability</li> <li>• for bulky yarns</li> <li>• tendency to random point-like contamination of the rotor groove</li> <li>• increased tendency to moiré faults</li> <li>• clean cotton</li> <li>• synthetic fibres</li> </ul>	●			●	●		●	●

● = recommended  
○ = possible

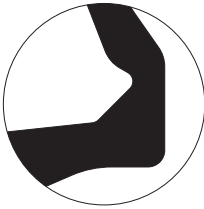
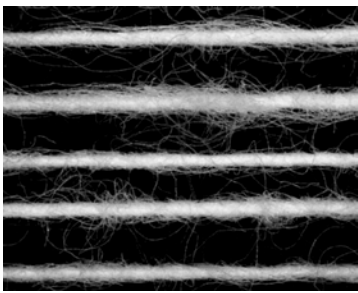
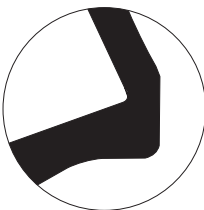
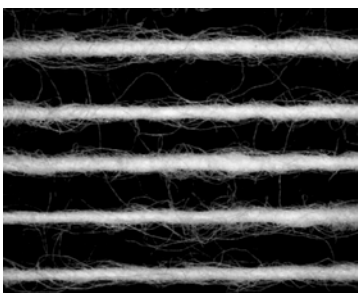
Rotor Type	Characteristics	Knitting yarn	Weaving yarn standard	Denim yarn	Cotton	Blends like PES//cotton	Regenerated fibres	Viscose	PES/PAC
GSQ 	<ul style="list-style-type: none"> <li>• preferably Ne 16 and finer</li> <li>• very good spinning stability</li> <li>• better yarn strength (versus G)</li> <li>• for bulky yarns</li> <li>• tendency to random point-like contamination of the rotor groove</li> <li>• tendency to moiré faults</li> <li>• clean cotton</li> </ul>	●			●				
K 	<ul style="list-style-type: none"> <li>• preferably Ne 20 and finer</li> <li>• good yarn values</li> <li>• for smooth yarns</li> <li>• less moiré faults</li> </ul>	○	●		●			●	
U 	<ul style="list-style-type: none"> <li>• preferably Ne 10 and coarser</li> <li>• high yarn bulk</li> <li>• relatively irregular yarn</li> <li>• low snarling tendency</li> </ul>			●	●	●	●		●
S 	<ul style="list-style-type: none"> <li>• for coarse yarn counts</li> <li>• high yarn bulk</li> <li>• for highly contaminated material</li> <li>• low snarling tendency</li> <li>• raised yarns</li> </ul>	●		●	●	●	●		●
V 	<ul style="list-style-type: none"> <li>• particularly suitable for synthetic fibres</li> <li>• good resistance to fibre shifting for yarns made of PAC or PES</li> </ul>			●					●


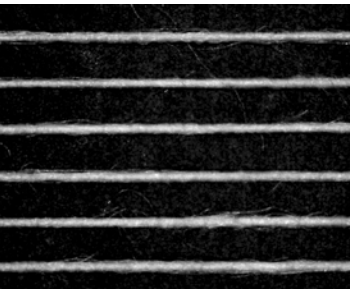

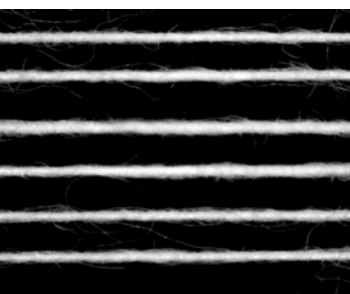

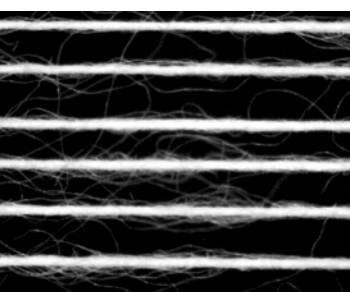
● = recommended  
○ = possible

## Yarn characteristics

Rotor groove	Black board	Yarn characteristics
$T \cong K$ 		<ul style="list-style-type: none"><li>• compact yarn</li><li>• low hairiness</li><li>• high yarn strength</li><li>• snarling tendency</li></ul>
$G \cong GSQ$ 		<ul style="list-style-type: none"><li>• bulky yarn</li><li>• soft hand</li><li>• reduced yarn strength</li></ul>
$TC$ 		<ul style="list-style-type: none"><li>• compact yarn</li><li>• low hairiness</li><li>• high yarn strength</li><li>• snarling tendency</li></ul>

Influence of rotor groove on yarn characteristic, example 100% cotton Ne 10

Rotor groove	Black board	Yarn characteristics
<p data-bbox="165 622 181 645">U</p> 		<ul style="list-style-type: none"> <li>• irregular yarn</li> <li>• tenacity lower than with T and TC</li> <li>• low tendency towards snarling</li> </ul>
<p data-bbox="165 936 181 958">S</p> 		<ul style="list-style-type: none"> <li>• irregular yarn</li> <li>• corkscrew structure</li> <li>• yarn slightly more compact than with U</li> </ul>

Rotor groove	Black board	Yarn characteristics
<p>B5</p> 		<ul style="list-style-type: none"> <li>• very compact yarn</li> <li>• lowest hairiness level</li> <li>• harsh hand</li> </ul>
<p>T</p> 		<ul style="list-style-type: none"> <li>• compact yarn</li> <li>• slight hairiness</li> <li>• yarn more bulky than with B5</li> <li>• harsh hand</li> </ul>
<p>G</p> 		<ul style="list-style-type: none"> <li>• bulky yarn</li> <li>• higher basic hairiness</li> <li>• soft hand</li> </ul>

Influence of rotor groove on yarn characteristic, example 100% viscose Ne 20

## Coatings

B = Boronized

High wear protection, slightly lower yarn values, easy cleaning even of sticky material

BD= Boronized and diamond-coated

High wear protection with best yarn values

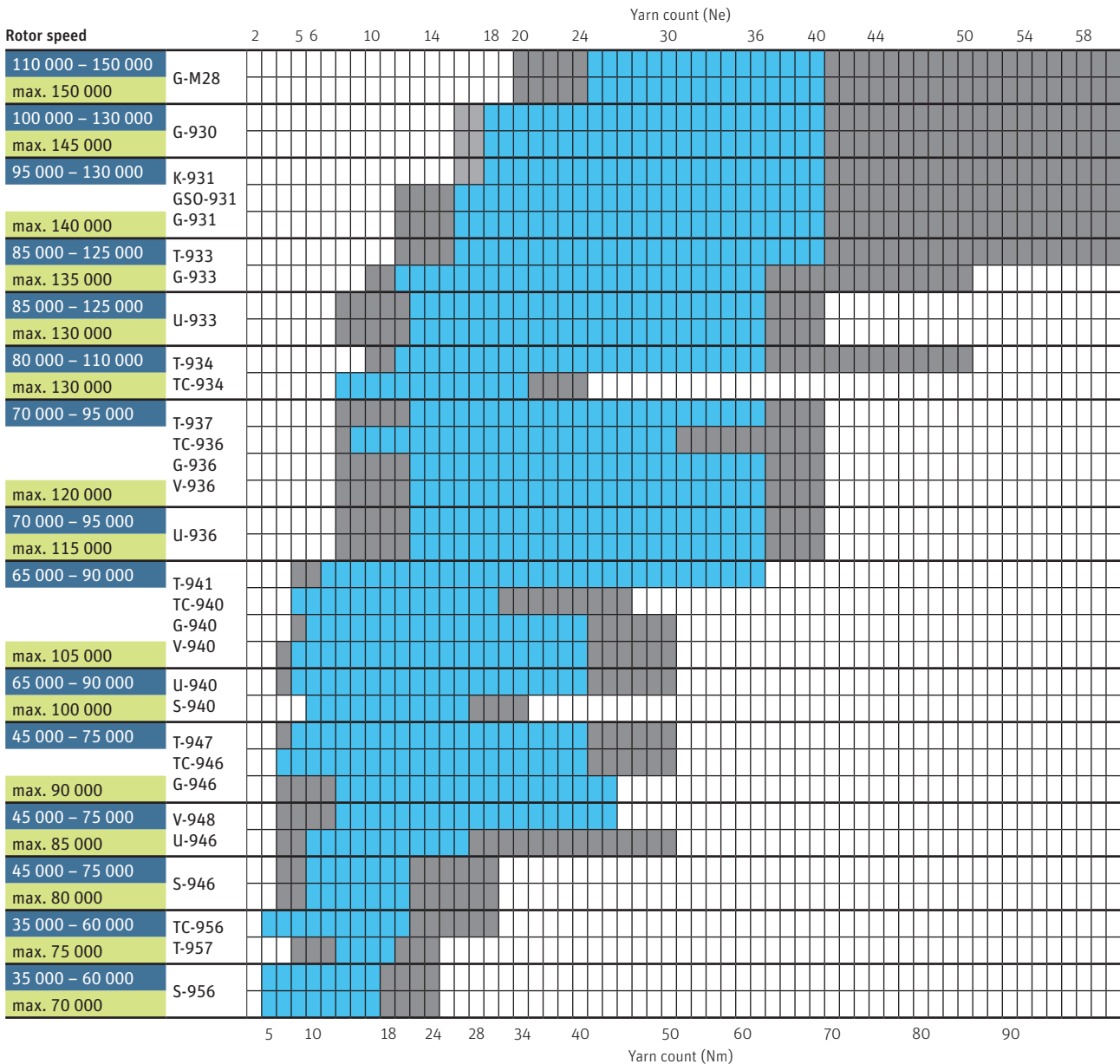
B5 = Boronized, narrow groove

For 100% viscose only, high wear protection, good yarn values, easy cleaning

E = Emetal-coated

Special coating for rotor plates of aluminium, yarn characteristics comparable with boronized rotors

## Rotor speed and yarn counts



- Technological recommendation
- Possible yarn count range
- Mechanically possible
- Proven yarn count range

## Rotors/channel plates/channel plate adapters/channel inserts/adapters





		KP 31 F KP 31 U	KP 33 F KP 36		KP 40 KP 40 F	KP 46	KP 56
<b>Channel plate SE 7/8/9</b>							
<b>Channel plate adapter SE 10</b>	28	31		36	40	46	56
<b>Channel Insert SC/SQ</b>	28	31			40	46	
<b>Adapter SE 11 – 20</b>	28	31		36	40		
<b>Rotor Ø</b>							
28	●						
30	○	●					
31.5	○	●					
33		●	●				
34		●	●				
36		○	●	●			
37		○	●	●			
40			○	○	●		
41			○	○	●		
46					○	●	
47					○	●	
48					○	●	
56						○	●
65						○	●

● = recommended  
○ = possible






# SOLIDRING

## SOLIDRING characteristics

SOLIDRING type and tooth shape	Characteristics	Knitting yarn	Weaving yarn standard	Denim yarn	Cotton	Blends like PES/cotton	Regenerates	Viscose	PES/PAC
B 174 	<ul style="list-style-type: none"> <li>• Aggressive sickle shape</li> <li>• Intensive opening action</li> <li>• Very good fibre separation</li> <li>• Good wear properties of the teeth</li> <li>• High trash extraction</li> <li>• Not suitable for man-made fibres</li> </ul>	●	●	●	●			●	
B 174-4,8 	<ul style="list-style-type: none"> <li>• Aggressive sickle shape with extended tooth pitch</li> <li>• Opening action more gentle than with B 174</li> <li>• Highly suitable for <b>blends of cotton/linen</b></li> <li>• Good fibre release into fibre channel</li> <li>• Not suitable for man-made fibres</li> </ul>	●	●	●	●				
B 187 	<ul style="list-style-type: none"> <li>• Highly aggressive sickle shape</li> <li>• Intensive opening action</li> <li>• Preferably for fine yarn counts &lt; 29 tex, &gt; Nm 34, &gt; Ne 20</li> <li>• Not suitable for man-made fibres</li> </ul>	●	●					●	
B 20 	<ul style="list-style-type: none"> <li>• Aggressive straight tooth</li> <li>• Intensive opening action</li> <li>• Bad wear properties of the teeth</li> <li>• High trash extraction</li> <li>• Not suitable for man-made fibres</li> <li>• Preferably for fine yarn counts &lt; 29 tex, &gt; Nm 34, &gt; Ne 20</li> </ul>	●	●		●				

● = recommended  
○ = possible

## SOLIDRING characteristics

SOLIDRING type and tooth shape	Characteristics	Knitting yarn	Weaving yarn standard	Denim yarn	Cotton	Blends like PES/cotton	Regenerates	Viscose	PES/PAC
S 21 	<ul style="list-style-type: none"> <li>• Slightly aggressive straight tooth</li> <li>• Gentle opening action for man-made fibres</li> <li>• Good fibre release into fibre channel</li> </ul>	•	•	•		•	•		•
S 25 	<ul style="list-style-type: none"> <li>• Unaggressive tooth shape</li> <li>• For very coarse yarn counts with large mass of fibres</li> <li>• Gentle opening action</li> <li>• Very good fibre release into fibre channel</li> <li>• No tendency towards merry-go-round fibres</li> <li>• No tendency towards lapping</li> <li>• Supports short, non-reproducible yarn effects</li> </ul>	•		•		•	•		•
S 43-3,6 	<ul style="list-style-type: none"> <li>• Slightly aggressive, straight, short tooth</li> <li>• Gentle opening action</li> <li>• Very good fibre release into fibre channel</li> <li>• No tendency towards merry-go-round fibres</li> <li>• No tendency towards lapping</li> <li>• Almost no dust</li> <li>• For high-end yarns</li> </ul>	•	•						•

## Material/SOLIDRING type/speed

Material	SOLIDRING type	Speed 1/min
Cotton	B 174	7 000 – 8 000
	B 174 – 4.8	7 800 – 8 600
	B 20	7 000 – 8 000
Regenerates	S 21	7 500 – 9 000
	S 25	7 500 – 9 000
Viscose	B 174	7 000 – 8 500
	B 187	7 000 – 8 000
PES/PAC	S 21	7 500 – 9 000
	S 25	7 500 – 9 000
	S 43 – 3.6	8 000 – 9 000
Blends like PES/cotton	S 21	7 500 – 9 000
	S 25	7 500 – 9 000

## Coating

### **N coating:**

Nickel coating mainly serves as anti-corrosive and does not provide much wear protection due to the reduced surface hardness.

To minimize punctiform wear, the nickel layer must be as thin as possible. The technological advantage of the thin layer is a sharp opening roller tooth providing better fibre opening and separation. Trash extraction is also better, as well as the yarn quality with lower ends-down rate especially in the fine count range.

Due to the low hardness of nickel, the guaranteed service life of nickel coated SOLIDRINGS is limited.

### **DN coating:**

The nickel-diamond coating offers long-term wear protection resulting from the significantly increased hardness compared with pure nickel coating. The nickel-diamond coating is 5 times thicker than nickel coating and consequently the opening roller teeth are rounder. In the fine count range in particular this can result in minor technological disadvantages in yarn quality and trash extraction.

The guaranteed service life for DN-coated SOLIDINGS is longer.

### **CR coating:**

To meet the demands of the market, a new coating type was developed that guarantees a long service life despite of very thin layers of coating. The new chromium coating fulfils these conditions perfectly for the processing of 100% cotton. It combines the sharp teeth of nickel coating with the service life of DN coating. This results in better yarn quality at longer service life. The coating offers only low protection against corrosion.

# Navels

Navels have an important influence on yarn hairiness and spinning stability. The interaction of navel geometry, surface structure and notches is essential for yarn hairiness and spinning stability. Whirl inserts mainly influence yarn hairiness.

The following illustrations show the influence of different navels to short and long hairiness in knitting and weaving applications.

For comparison, yarns of 100% cotton were spun with various navels under identical spinning conditions.

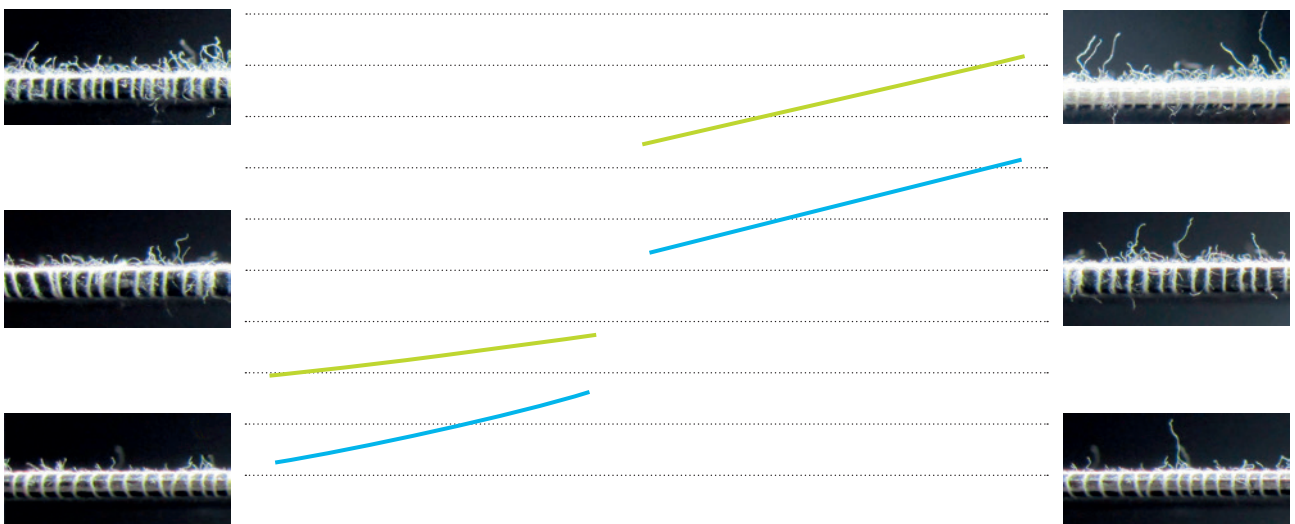
The red lines represent short hairs up to 3 mm (Hairs S1/2), while the blue-dotted lines represent long hairs over 3 mm (Hairs S3). The illustrations sort the navels from smooth, compact yarn to bulky and hairy yarn. So they offer an orientation for choosing navels, if customers want to change the yarn character to one direction or the other.

## Knitting yarn

In knitwear applications, a soft hand of the knitwear, bulky yarns and high covering properties are preferred. Depending on the fibre material long hairs can produce undesirable pilling effects.

### Yarn characteristic by navel type

Weaving yarn using the example of 100% cotton



— Hairs S1/S2      - - - Hairs S3

High take-off speed



ProFiL 6



ProFiL SM

Normal take-off speed



KN4



KN8



KS M



KS R4



KN8 R4



KS 2R4



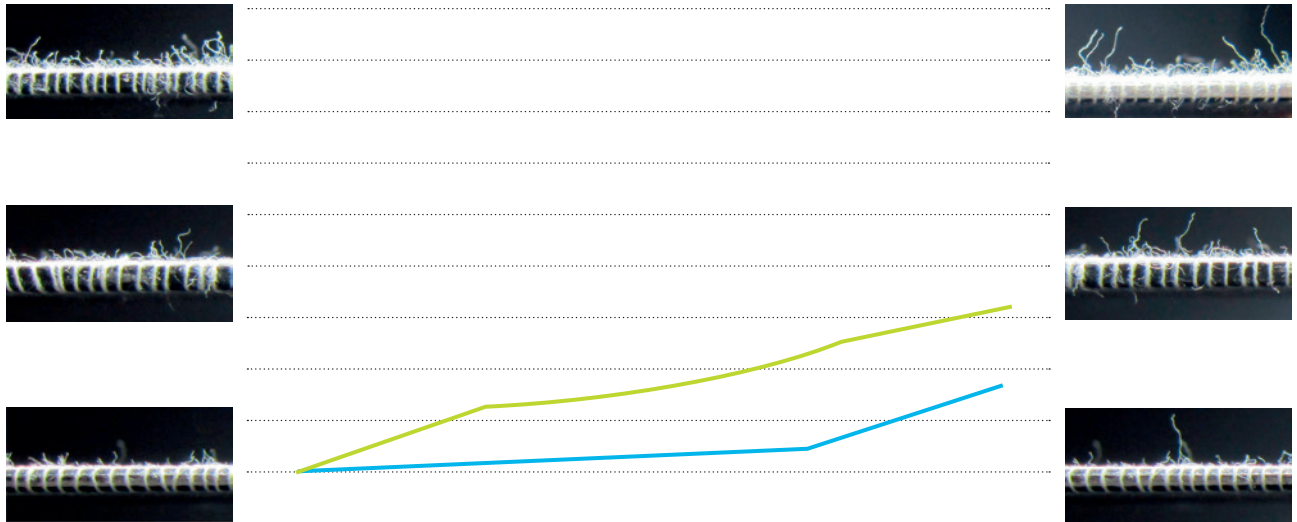
KN4 2R4

## Weaving yarn

In weaving applications, a high work capacity is desired which is mainly achieved with smooth and compact yarns. On air-jet looms the ratio of weft insertion is improved if yarns with a higher degree of short hairs are used.

### Yarn characteristic by navel type

Weaving yarn using the example of 100% cotton



— Hairs S1/S2      — Hairs S3

High take-off speed



Normal take-off speed



# Navels

## ProFiL Navels applications

### Cotton diagram

In knitwear applications the hand of a fabric is an important attribute. The hairiness level has a direct influence on this attribute. At the “normal” speed level, the KS M navel provides increased short hairiness (up to 3 mm) while the other navels also increase the amount of longer hairs (longer than 3 mm). ProFiL 6 navels also increase the amount of short hairs (up to 3 mm) and support in addition a good spinning stability at high speed levels.

In weaving applications long hairs in particular disturb the downstream processes. If smooth yarns are required, the spiral navels KS and ProFiL S are preferably used. A higher percentage of short hairs improves for example the efficiency of air jet looms. The KS M and the ProFiL SM navels provide these required short hairs.

### PES and PES/Cotton diagram

In knitwear applications the ProFiL Navels minimize the thermal damage to the PES fibres, due to the smooth surface. While the ProFiL 4 navel permits spinning at normal speed, the ProFiL 6 navel minimizes thermal damages at high speeds owing to its smaller support area. The resulting hairiness of both navel types still provides a good hand of the knitwear.






The MIMA navels have been developed for weaving applications with 100% PES. Their material and contour are particularly suitable for processing 100% PES. They stand out for a reduced risk of thermal damages, but allow higher rotor speeds. They still provide the best results in weaving applications.

### Viscose diagram

The speed range and application of the ProFiL 4 navel is universal. The ProFiL 4 performs with any viscose fibre type at a very low end-break level with good yarn quality parameters. In weaving applications other navels produce better yarn parameters, but a slight increase in end-breaks is observed.



# Torque Stop

Torque Stop type	Properties	Knitting yarn > Ne 20	Knitting yarn < Ne 20	Weaving yarn > Ne 16	Weaving yarn < Ne 16	Rotor < 33 mm or low yarn twist
<p>Clip green</p> 	<ul style="list-style-type: none"> <li>• Smooth Torque Stop</li> <li>• No additional twist-retaining effect</li> <li>• S3 hairiness not influenced</li> <li>• Application: flat yarns with warp twist</li> </ul>			○	●	
<p>Clip red</p> 	<ul style="list-style-type: none"> <li>• Torque Stop with 3 soft twist-retaining ribs</li> <li>• Increased twist-retaining effect</li> <li>• S3 hairiness slightly increased</li> <li>• Reduced ends-down and possible reduction of twist coefficient</li> </ul>		●	●	○	
<p>Clip white</p> 	<ul style="list-style-type: none"> <li>• Torque Stop with 3 sharp twist-retaining ribs</li> <li>• Intensified twist-retaining effect</li> <li>• Increased S3 hairiness</li> <li>• Reduced ends-down and possible reduction of twist coefficient</li> </ul>	●	●	●	○	●
<p>Clip black</p> 	<ul style="list-style-type: none"> <li>• Torque Stop with 3 aggressive, sharp twist-retaining ribs</li> <li>• High twist-retaining effect</li> <li>• S3 hairiness strongly increased</li> <li>• Reduced ends-down and possible reduction of twist coefficient</li> </ul>	○				●
<p>TS 37</p> 	<ul style="list-style-type: none"> <li>• Intensified twist-retaining effect</li> <li>• Comparable with white Torque Stop</li> <li>• Increased hairiness</li> <li>• Tendency to clogging</li> </ul>	○				○

● = recommended  
○ = possible



# Warranty and Expected Service Life for Technology and Wear Parts



**General remarks:**

- Careful handling and maintenance of the listed spinning components and wear parts is taken for granted
- Premature wear of the spinning components, depending on the fibre material processed, is no reason of complaint
- All information on warranty and expected service life are not applicable, if very sandy or bleached cotton, delustered or spun-dyed fibres are processed
- The expected service life depends on material throughput, trash degree and fibre quality
- In cases, which fall within the period of warranty, SUESSEN will be prepared to accept proportional responsibility for the service life not reached

**1) Rotors**

Type	Fibre type	Warranty	Expected service life
Steel rotor B (boronized)	All	15 000 h	30 000 h
Steel rotor D (diamond-coated)	All	8 000 h	18 000 h
Steel rotor BD (boronized and diamond-coated)	All	15 000 h	30 000 h
Steel rotor B5 (boronized)	CV	1 500 kg	3 000 – 4 000 kg

**2) Navels/Torque Stops**

Type	Fibre type	Warranty	Expected service life
Navels with ceramic insert	Cotton	20 000 h	40 000 h
	Cotton/PES blends	20 000 h	40 000 h
	PES, CV	16 000 h	30 000 h
	PAN	12 000 h	20 000 h
Torque Stop		20 000 h	40 000 h

**3) SOLIDRING**

Type	Fibre type	Warranty	Expected service life
<b>SOLIDRINGS without diamond-coating (1)</b>			
B 174-4.8 N B174 N B 20 N	Cotton	4 500 kg or 9 000 h	15 000 to 20 000 h
		4 500 kg or 9 000 h	15 000 to 20 000 h
		4 000 kg or 8 000 h	15 000 h
S 21 N	PAN, PES, CV	1 000 kg or 2 500 h	5 000 h
S 43-3.6 N	PES	1 000 kg or 2 500 h	5 000 h
<b>SOLIDRINGS with diamond-coating</b>			
B 174-4.8 DN B174 DN B 20 DN B 187 DN	Cotton	9 500 kg or 20 000 h	20 000 to 30 000 h
	PAN, CV	4 500 kg or 10 000 h	15 000 to 20 000 h
S 43-3.6 DN	PES	2 500 kg or 6 000 h	10 000 h
	Cotton	10 000 kg or 20 000 h	30 000 h
S 21 DN S 25 DN	Cotton/PES blends	7 000 kg or 15 000 h	25 000 h
	PAN, PES, CV	4 500 kg or 10 000 h	20 000 h
<b>SOLIDRINGS with chromium-coating (2)</b>			
B 20 CR B 174 CR	Cotton	9 500 kg or 20 000 h	30 000 to 40 000 h

## Remarks:

- (1) No guarantee is given for spinning Denim yarns or very dirty cotton. In such case, diamond-coated SOLIDRINGS are recommended.  
(2) Damages due to corrosion excluded

#### 4) Wear parts

		Warranty	Expected service life
TwinDiscs	SE 7/SE 8	18 000 h (3)	24 000 to 30 000 h
	SE 9 – 12/SC/SQ 9*	21 500 h (3)	24 000 to 40 000 h
	* rotor speeds above 130 000 rpm	21 500 h (3)	24 000 to 30 000 h
ProFiL Cartridge		12 000 h (4)	25 000 h
Worm gear		1 year (5)	4 years
Brake pads for rotor brake		9 000 h	30 000 h
Ball bearing pivot for TwinDiscs		5 years (6)	12 years
Ball bearing pivot for opening rollers		3 years (6)	10 years
Rollers for rotor and opening roller belts		3 years (7)	10 years

Remarks:

- (3) Information applies to 90% of the components according to standard for bearings.  
 TwinDiscs must be pressed on with the appropriate SUESSEN device.  
 No guarantee is given in case of consequential damages due to defective tangential belts.  
 Dirt deposits on rotor shafts are to be removed in time (this is particularly important when processing PAN fibres).  
 Formation of slight grooves in the TwinDisc tyre surface is not detrimental.
- (4) The guarantee is only valid for the use of rotors specified by SUESSEN with ceramic pin at the shaft end.  
 As a precaution, the grease cartridges should be replaced after 2 years.
- (5) No guarantee is given if fancy yarn equipment is used.
- (6) Information applies to 90% of the components according to standard for bearings. If maintenance and lubrication instructions are not observed, no guarantee can be given. SUESSEN offers appropriate lubricating devices.
- (7) Information applies to 90% of the components according to standard for bearings. If maintenance instructions are not observed, no guarantee can be given.  
 Please take care that the roller surface is cleaned of any possible dirt.





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