Suessen

Premium Parts

for Autocoro spinning machines

Good – better – premium

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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.

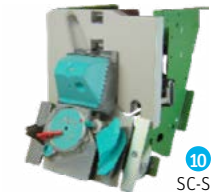
To date, SUESSEN has manufactured and delivered over 3 million SpinBoxes.

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.

12 S60/ S66

13 S70



10 SC-S

11 SC-R

8 SE10

9 SQ/SC-S

6 SE8

7 SE9

4

5 SE7

2 SE6

3

1

1970

1980

1990

2000

2010

2020

2021: Market introduction of the SUESSEN S70 SpinBox for RIETER R70 rotor spinning machines. 13

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

2002: Market introduction of the SUESSEN SC-R SpinBox for RIETER R40 rotor spinning machines. 11

2001: Market introduction of the SUESSEN SC-S SpinBox for SAVIO rotor spinning machines. 10

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

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

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

1984: Introduction of the new SOLIDRING. 4

1975: First automatic rotor spinning machine with SUESSENS SE6 SpinBox, CleanCat and SpinCat for automatic cleaning and piecing-up. 2 3

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. 1

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.

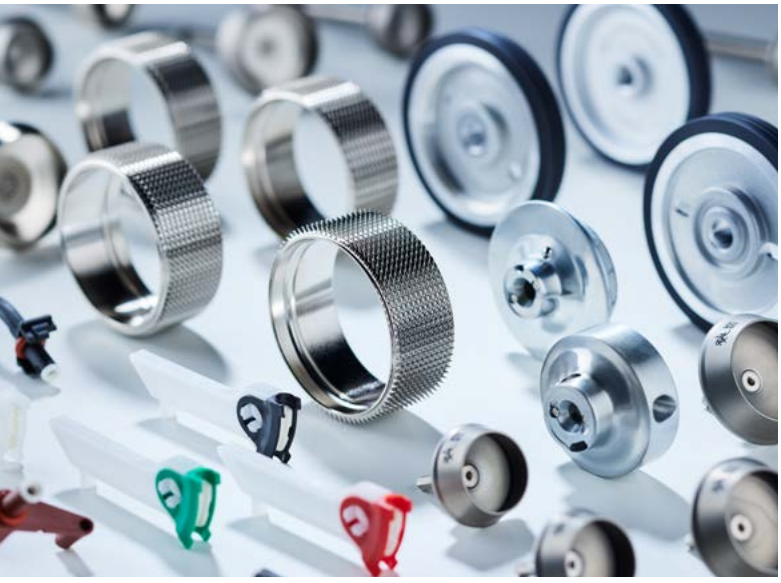
SUESSEN developed and manufactured for over 20 years the SE 7, 8, 9 and 10 SpinBoxes exclusively for Schlafhorst Autocoro, as well as the corresponding spinning accessories. We are therefore right to say we are the original spare parts supplier, and nobody knows the SpinBox better than we do.

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 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 effiency, 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

*Pro*FiL Rotors

In 2004, the outside contour of the SUESSEN rotors was optimized by FEM methods. So the stress in the *Pro*FiL 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.

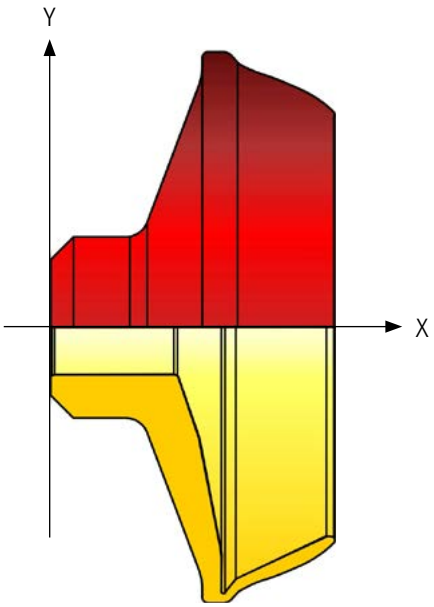
Precise manufacturing and dynamic balancing are responsible for a smooth running. The proven 2 µm diamond coating offers optimum results with regard to fibre orientation and the homogeneous sliding of the fibres into the rotor groove.

SUESSEN *Pro*FiL Rotors are available for all Autocoro SpinBoxes SE 7 to SE 12 and for SUESSEN SpinBox SC and SQ, in various designs for different material and applications.

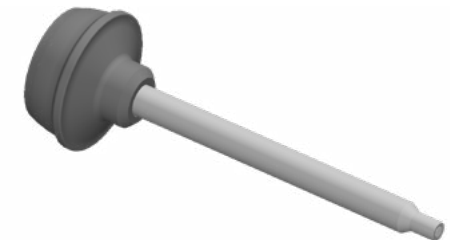
Example for denomination

T 9 34 BD

- Surface treatment
  - B = boronized
  - D = diamond coated
  - BD = boronized and diamond coated
  - B5 = boronized, close groove
  - E = Ematal-coated
- Groove diameter in mm
- Code
  - 8 = SE 7/8, SQ 7/8
  - 9 = SE 9/10, SC, SQ 9/10, SE 11 hybrid
  - M = Magnetic thrust bearing SE 11/12
  - 6 = SE 20
- Groove shape



*Pro*FiL Rotors Hybrid shaft 8.0 SE 7/8

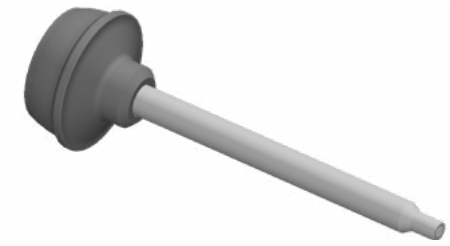


Type	Part No.
T 833 BD**	10141792
T 834 B**	10611603
T 834 B5**	10141853
T 834 BD**	10141691
T 837 B	10141868
T 837 BD	10141696
T 841 B	10141866
T 841 B5	10141862
T 841 BD	10141702
T 847 B	10141878
T 847 BD	10141708
TC 836 BD	10141715
TC 840 B	10541404
TC 840 BD	10141721
TC 846 BD	10141729
TC 856 BD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

**Requires washer 1.5 mm (see page 18)
***Requires washer 3 mm (see page 18)

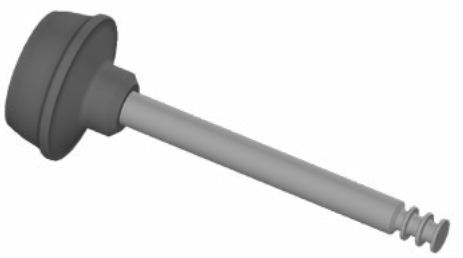
*Pro*FiL Rotors Hybrid shaft 8.0 SE 9/10/11/12/ SC/SQ



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

*Pro*FiL Rotors
Magnetic shaft
SE 11/12 (MRPS)



Type*	Part No.
T M33 B5**	10665207
T M33 BD**	10665209
T M34 B5**	10787260
T M34 BD**	10787341
T M34B**	10975298
T M37 BD	10787345
T M41 B	10787346
T M41 B5	10787347
T M41 BD	10787371
T M47 B	11086261
T M47 BD	10931015
TQ M33 BD	11156181
TC M34 BD	10961726
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

Type*	Part No.
G M36 BD	10787321
G M40 BD	11065660
G M46 BD	11065662
KT M28 BD	11009096
K M31 B5	11011673
K M31 BD	10997914
U M40 BD	10787375
U M46 BD	11201525
S M40 BD	10976898
S M46 B	11182323
S M46 BD	10998680

Rotors
SE 20

Type*	Part No.
G 628 BD	11204051
G 630 BD	11203934
G 631 BD	11257227
G 633 BD	11210484
G 633 B	11284403
G 636 BD	11200860
G 636 B	11248852
G 640 BD	11203851
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

Type*	Part No.
TT 636 BD	11246695
TT 640 BD	11247404
TT 646 BD	11247294
U 640 BD	11205095
U 646 BD	11205132
S 652 DN	11247684

*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

B 174 DN

Surface coating
N = nickel-plated
DN = diamond and nickel-plated
CR = chromium-plated

Code for tooth shape

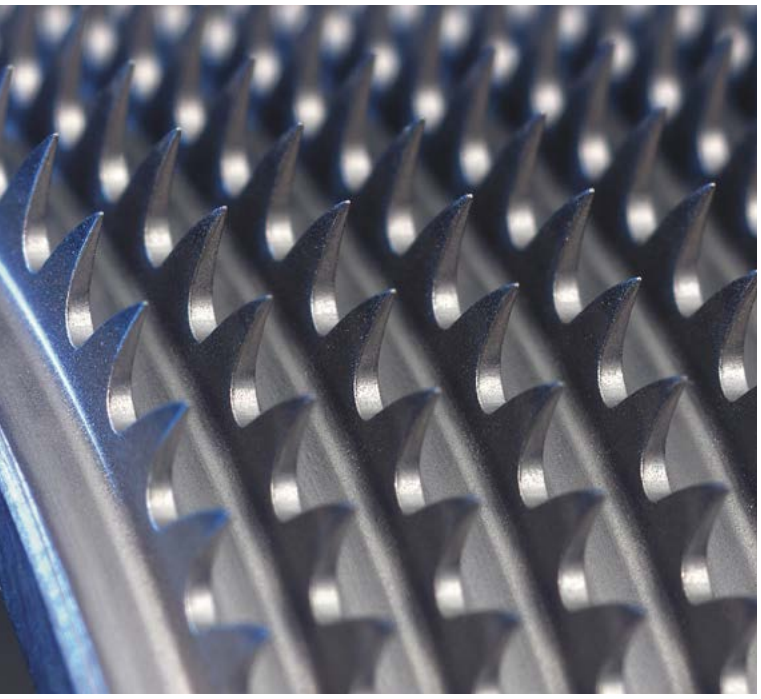
Code for application
B = cotton + viscose
S = synthetics and blends

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

SOLIDRING	Part No.
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

Cup spring SE 7/8/9/10/11/12	Part No.
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

958.2286
Opening roller bearing, complete
SE 7/8

958.2568
Opening roller bearing, complete
SE 9

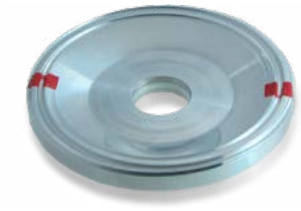
955.4461
Opening roller bearing, complete with ventilation groove
SE 10/11/12/SQ

959.0072
Opening roller bearing, complete
SC

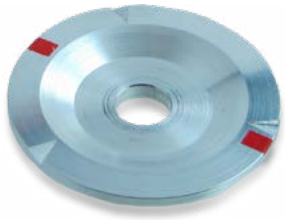
953.5489
Clamping ring
SE 7/8

953.5488
Clamping ring
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 *Pro*FiL 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.

*Pro*FiL Navels

At high take-off speeds, the influence of the ceramic surface of the navels on fibre damages is unquestioned. *Pro*FiL 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 *Pro*FiL Navels has been optimized especially in the yarn contact areas. So the *Pro*FiL 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.

*Pro*FiL 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
*Pro*FiL 4	11231576	*Pro*FiL S	11229104
KN3	11108576	KS R4	11169599
KN4 R4	11234214	KS 2R4	11168673
KN4 2R4	11234199	KS M	11233498
*Pro*FiL 6	10495182	*Pro*FiL 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
*Pro*FiL 4	11231663	KS	10231732
KN3	11108684	*Pro*FiL S	11135347
KN4 R4	11234259	KS R4	11169332
KN4 2R4	11234370	KS 2R4	11168709
*Pro*FiL 6	11245937	KS M	11233532
KN8	11108752	*Pro*FiL 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

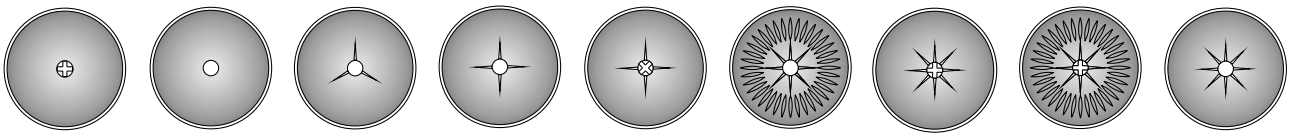
Magnet washer for navel 3.0 mm

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

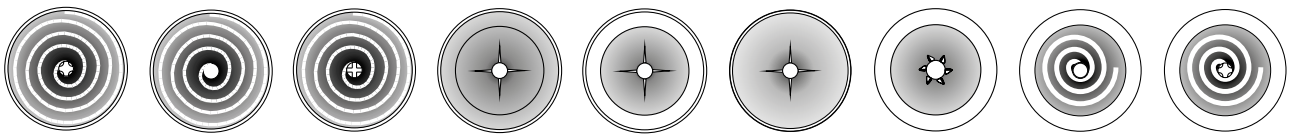
10400808

Magnet washer for navel aluminium 1.5 mm

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



KN R4 | KN | KN3 | KN4 | KN4 R4 KN4 2R4 | KN8R | KN8 R4 KN8 2R4 | KN8R R4 KN8R 2R4 | KN8



KS M | KS | KS R4 KS 2R4 | Mima 1 | Mima 2 | *Pro*FiL 4 | *Pro*FiL 6 | *Pro*FiL S | *Pro*FiL SM

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.

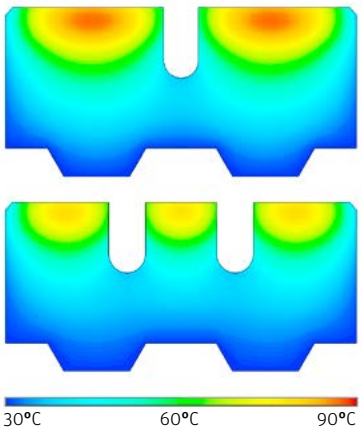


Fig. 1: SUESSEN TwinDisc, new standard: comparison of heating characteristics of tires with 1 or 2 cooling grooves respectively at identical rotor speed

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

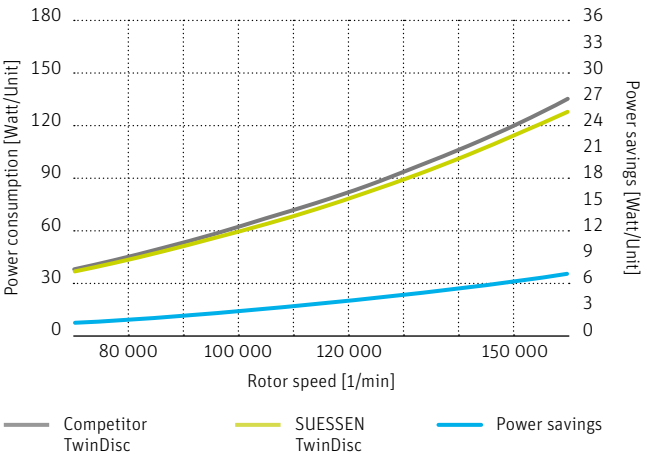


Fig. 3

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.**
*Pro*FiL Reflector	10147672

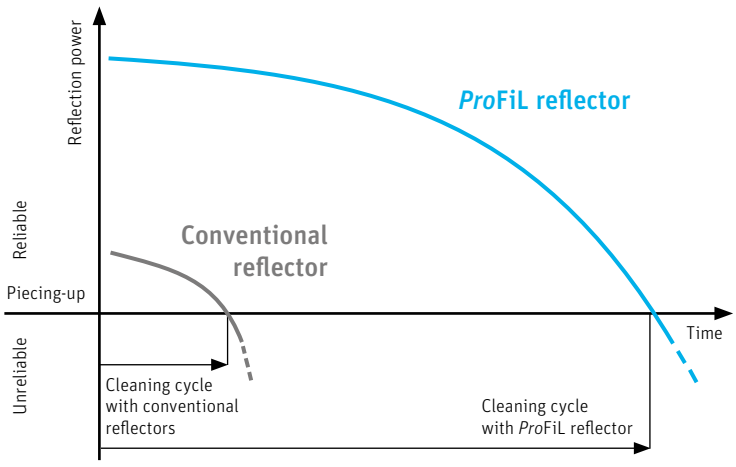
*Pro*FiL Reflector

SUESSEN has developed a new reflector, the red *Pro*FiL 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
Take-off tube complete
TS 30
SE 7/8/9/SC/SQ

953.6435
Take-off tube complete
TS 37
SE 7/8/9/SC/SQ

957.5332
Take-off tube complete
SE 10

10976009
Take-off tube complete
SE 11 – 12

954.0948
O-Ring for take-off tube
SE 7/8/9/SC/SQ

294.0113
O-Ring for take-off tube TS 37
SE 7/8/9/SC/SQ

958.1005
O-Ring for take-off tube
SE 10 – 20

10232284
Flange eye
SE 7/8/9/10/11/12/20/SC/SQ

956.1089
Threaded pin
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

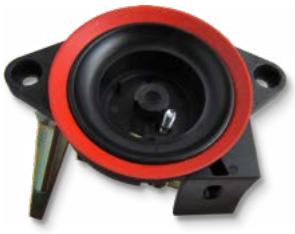
Channel plate adapter	
SE 10	**Part No.**
28	957.7502
31	957.6225
36	957.6242
40	957.6228
46	957.8379
56	957.8463

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	Channel plate Adapter	Channel Insert	Adapter
SE 7/8/9	SE 10	SC/SQ	SE 11/12/20



958.6832	**957.6345**
Support plate	Support plate
SE 10	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

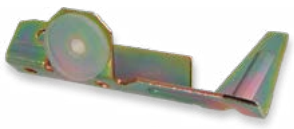
10975967
Sealing ring
SE 11-20

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.

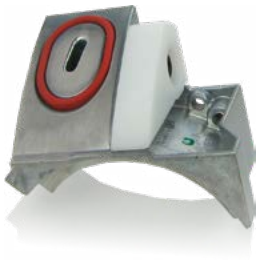
Fibre Channels

955.9408
Fibre channel complete D-FG
SE 9

958.6517
Fibre channel complete U
SE 9

955.9407
Fibre channel complete D
SE 9

958.6892
Fibre channel complete
SE 10



10384853
Fibre channel complete
SQ

10427594
Fibre channel complete
SC

952.6756
Sealing ring fibre channel
SE 7/8/9/10/SQ

954.8526
Sliding piece
SE 7/8/9

957.7507
Sliding piece
SE 10

957.7504
Sliding piece
SQ

10975963
Fibre channel seal
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 KP 36 KP 40 KP 46 KP 56	958.4848 958.6852 958.6854 958.6858 958.6860
SE 9	955.9192	D-FG	955.9408	D-FG	KP 31 F KP 33 F KP 40 F KP 36 (optional)	958.6846 958.6850 958.6856 958.6852
SE 9	956.0205	U	958.6517	U	KP 31 U KP 36 KP 40 KP 46 KP 56	958.4848 958.6852 958.6854 958.6858 958.6860
SE 9	955.9193	D	955.9407	D	KP 31 U KP 36 KP 40 KP 46 KP 56	958.4848 958.6852 958.6854 958.6858 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

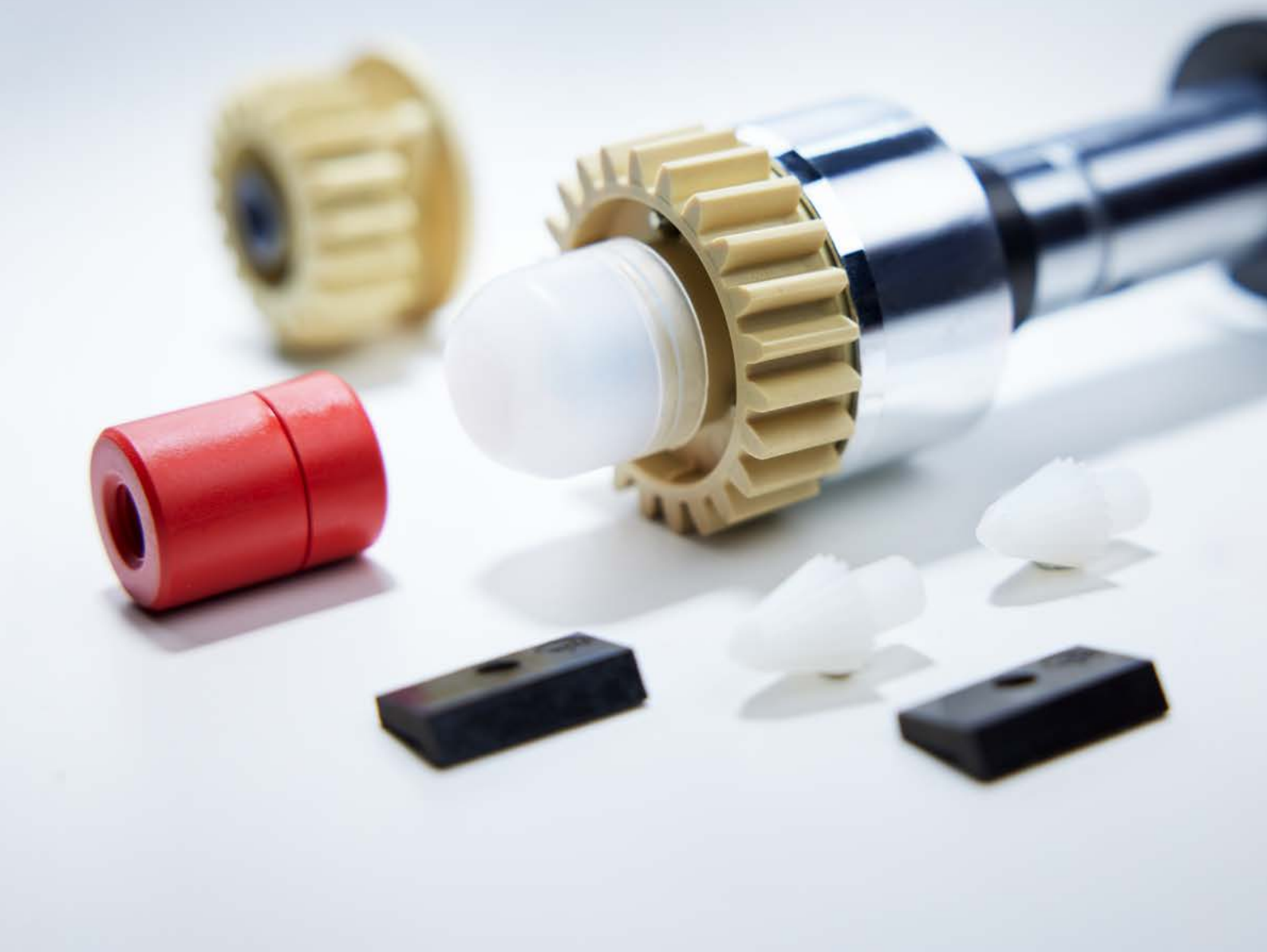
10963483

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

955.5125
Rotor housing complete
SE 8

955.5124
Rotor housing
SE 8

957.2737
Rotor housing complete
SE 9/10

957.2736
Rotor housing
SE 9/10

958.3403
Rotor housing complete
SQ 8

958.3404
Rotor housing
SQ 8

958.9376
Rotor housing complete
SQ 9

958.9377
Rotor housing
SQ 9

10153133
Rotor housing complete
SC

10965724
Rotor housing complete
SE 11/12

10964496
Rotor housing
SE 11/12

954.1034
Bush rotor housing
SE 9/12

953.3895
Seal collar
SE 7/8/SQ 8

954.1036
Seal collar
SE 9/10/11/12/SQ 9

958.0265
Air seal
SC

953.0738
Sealing ring
SE 7/8/9/10/11/12/SC/SQ

957.0631
Rotor seal
SE 7/8/SQ 8

953.3898
Washer
SE 7/8/SQ 8

Oil Containers and Seals

953.8095
Oil container
SE 8

953.3767
Oil container
SE 9/10

954.0362
Sealing ring
SE 8

956.8196
Sealing ring
SE 9/10

10975978
Seal
SE 11

956.2594
Oil felt, saturated 24 pcs.
SE 8/9/10

10966397
Oil felt, saturated 24 pcs.
SE 11

952.8511
Seal
SE 8

952.8510
Lid thrust bearing housing
SE 8

958.3463
Lid thrust bearing housing
SQ 8

957.0297
Thrust bearing housing lid
SE 9/10/SC/SQ 9

247.0382
Ball 12 mm
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

*Pro*FiL Cartridge

10324794

*Pro*FiL Cartridge

Packing unit 24 pcs.

SE 7/8/SQ 7/SQ 8

10324795

*Pro*FiL Cartridge

Packing unit 24 pcs.

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

10328152

Thrust-bearing modernization with *Pro*FiL Cartridge

SE 8

10487815

Thrust-bearing modernization with *Pro*FiL Cartridge

SE 9/10/11 hybrid

10582711

Thrust-bearing modernization with *Pro*FiL Cartridge

SE 11/12 magnetic

Brake Linings

955.0132
Brake pad
SE 8/SQ 8

10386594
*Pro*FiL 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

10688960

Worm gear for slub yarn device complete, SC

955.0663

Armature plate

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

289.2718

Oval head screw

10258843

Hexagon nut

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

10964399

Armature plate, SE 11

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

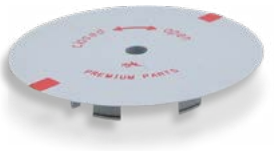
SE 7/8/9/10/SC/SQ

Cover Plates

952.8839
Cover plate
SE 7/8

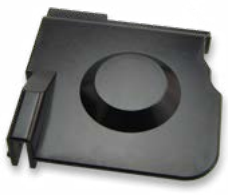
955.8133
Cover plate
SE 9

957.6367
Cover plate
SE 10



11048238
End cover grey
SC/SQ

10974174
Cover plate yellow
SE 11

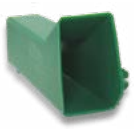


10974176
Cover plate black
SE 11/12

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 ∅ 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

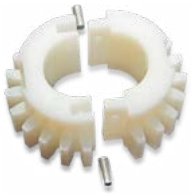
10972398
Guide piece
- ACO 480

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 ≤ 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

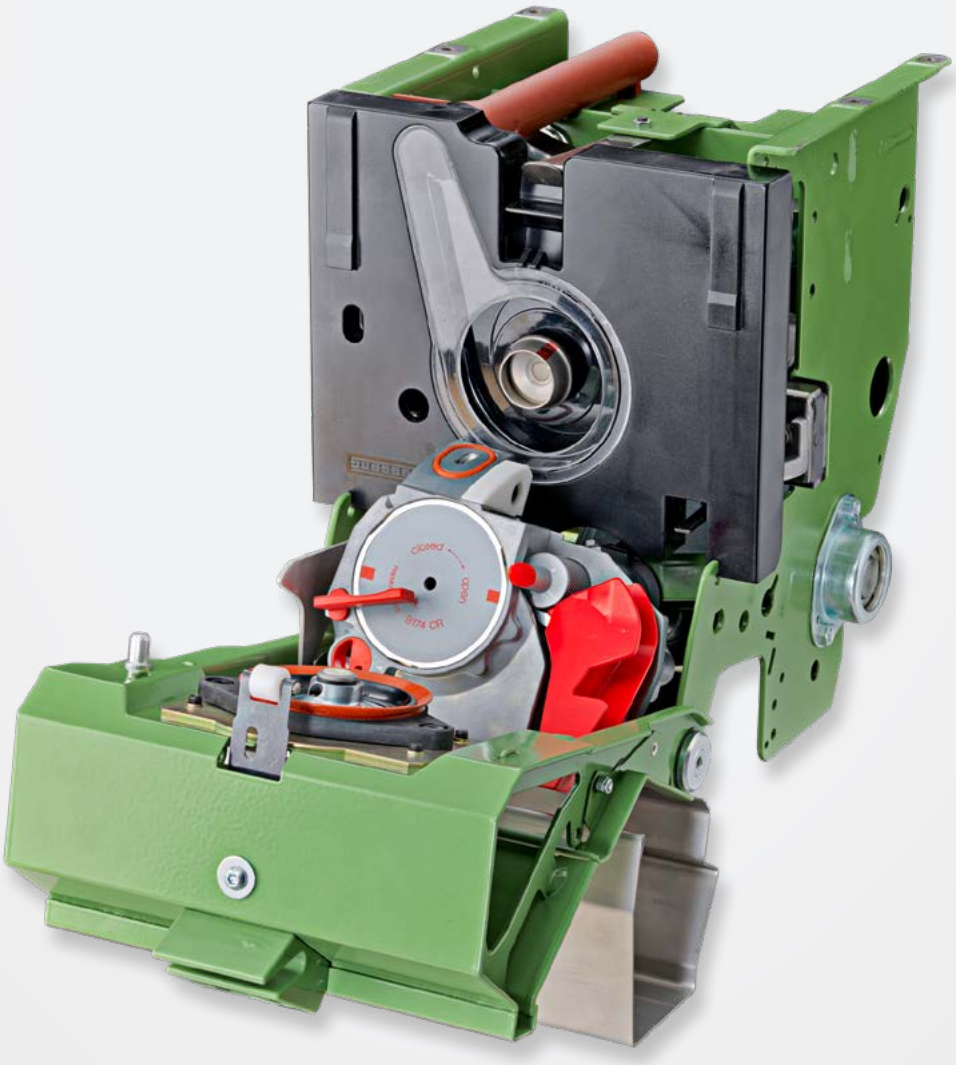
Width [mm]	Length [mm]	Positions	Part No.
115	46.682	192	11156021
115	52.269	216	11269940
115	57.857	240	*
115	63.444	264	11140852
115	69.031	288	10846343
115	74.619	312	10846341
115	80.207	336	*
115	85.793	360	10846345
115	91.380	384	*
115	96.968	408	10980278
115	102.555	432	*
115	108.143	456	*
115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

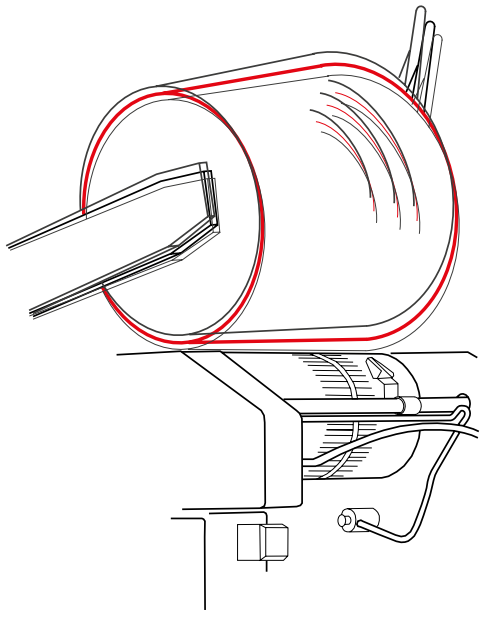
- „Bouncing“ packages lead to irregular package density (see R.H. Fig. above).
- Packages with a high degree of bouncing are temporarily no longer driven – the yarn forms crinkles on the packages.
- Incorrect length measuring with diameter-related doffing
- Problems with the piecer carriage in finding 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 *Pro*FiL Cartridge

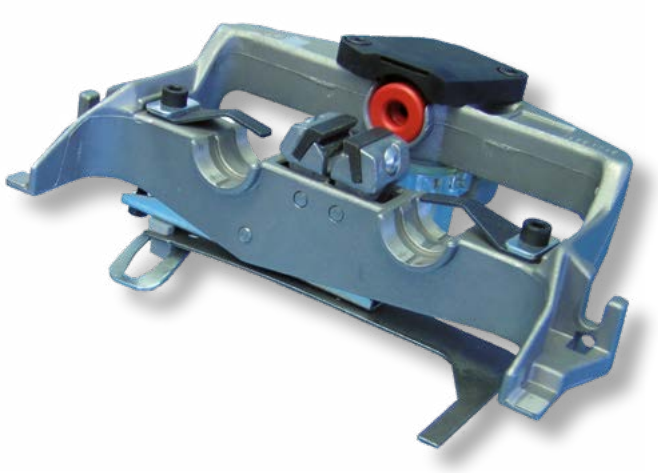
The SUESSEN *Pro*FiL Cartridge is a rotor bearing without oil emission.

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 *Pro*FiL 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:
- *Pro*FiL 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 *Pro*FiL 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 *Pro*FiL Cartridge is available for SpinBoxes SE 7/8/9/10/11/12/SC/SQ.

Comparison of bearing with *Pro*FiL 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 *Pro*FiL Cartridge	SE 8
10487815	Thrust Bearing modernization with *Pro*FiL Cartridge	SE 9/10/11 hybrid
10582711	Thrust Bearing modernization with *Pro*FiL Cartridge	SE 11/12 magnetic

Part No.	Description	SpinBox type
959.2194	Thrust Bearing modernization with *Pro*FiL Cartridge and TwinDisc	SE 8
958.6398	Thrust Bearing modernization with *Pro*FiL Cartridge and TwinDisc	SE 9/10/11 hybrid

Spare parts thrust bearing modernization

10324794

*Pro*FiL Cartridge

Packing unit 24 pcs.

SE 7/8/SQ 7/SQ 8

10324795

*Pro*FiL Cartridge

Packing unit 24 pcs.

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

10328152

Thrust-bearing modernization with *Pro*FiL Cartridge

SE 8

10487815

Thrust-bearing modernization with *Pro*FiL Cartridge

SE 9/10/11 hybrid

10582711

Thrust-bearing modernization with *Pro*FiL Cartridge

SE 11/12 magnetic

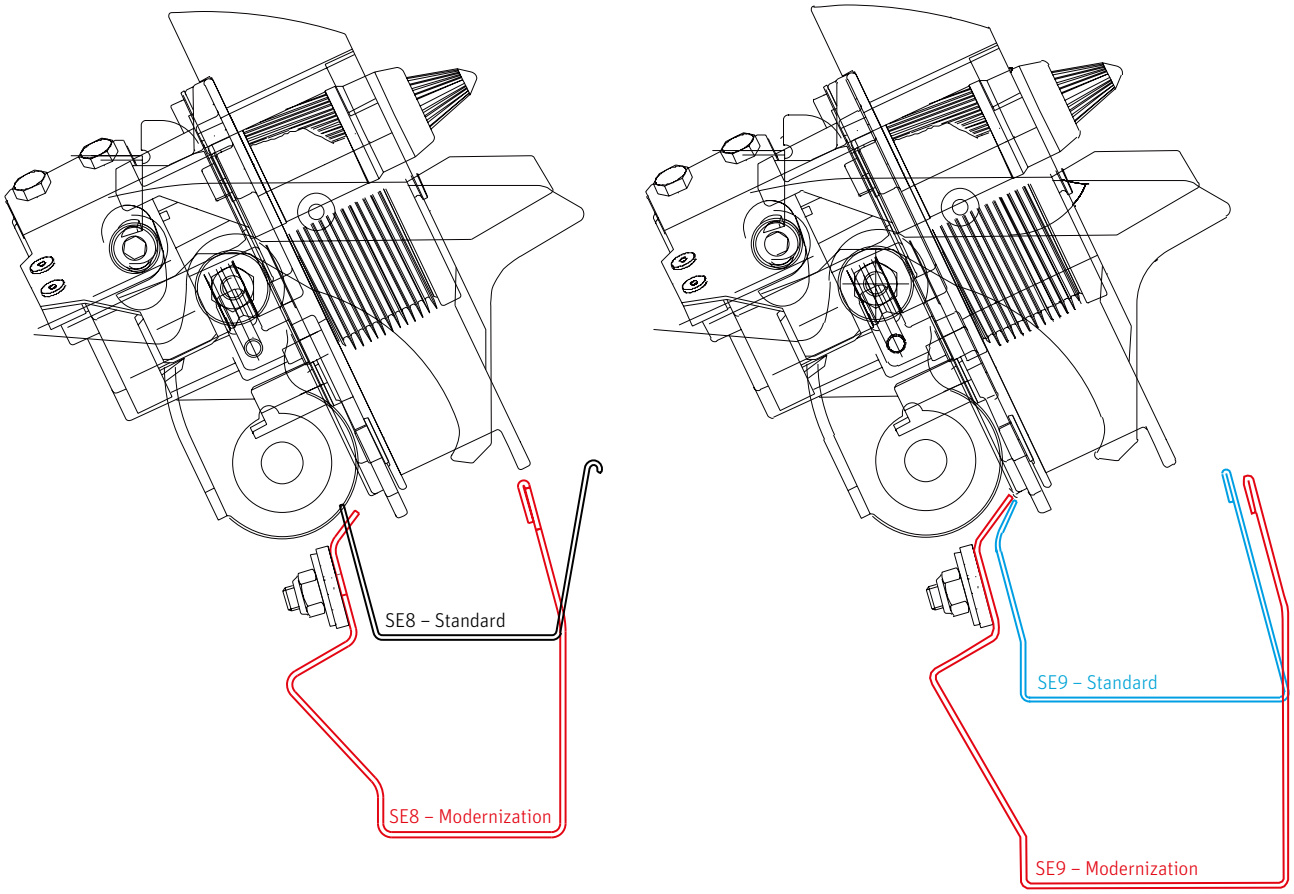
TrashChannel Modernization

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

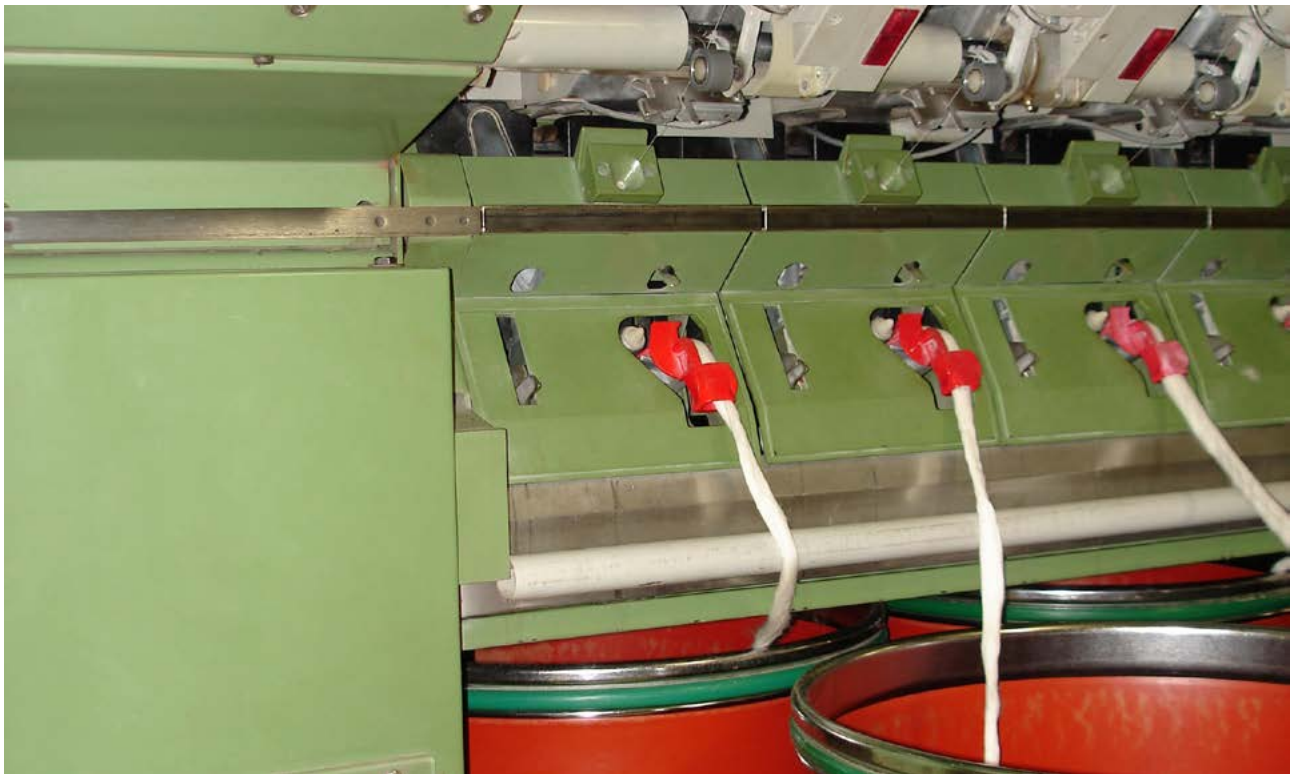
Considering these results, the pay-back period is up to one year only for most applications.



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.

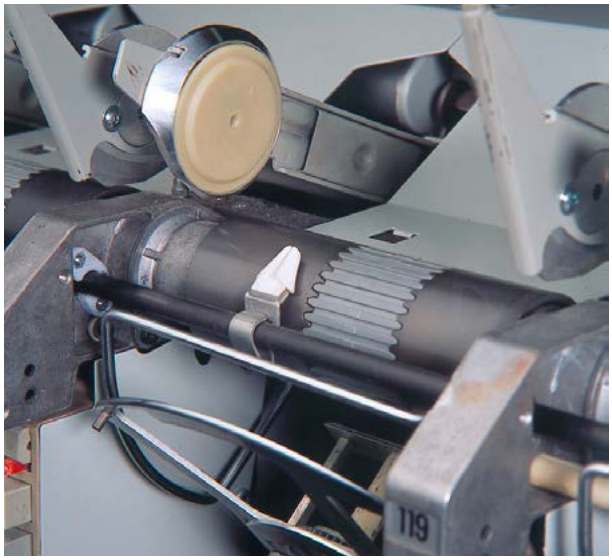
The TrashChannel modernization Package is available for SpinBox SE 8/9 on ACO Standard to 288 (SE 10 on demand).

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

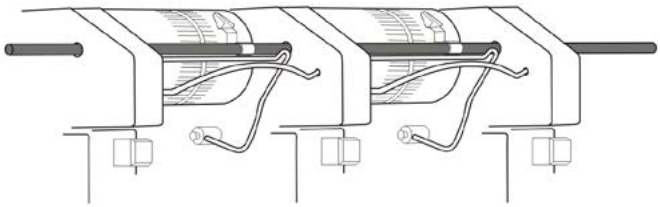
The performance of rotor spinning machines is often limited by the physical characteristics of the yarn-guide rod as well as of the central gear (traverse gear located in the headstock). The limiting factors are, in particular, gear load and deformation (extension/up-setting) of the traverse rod.



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.



	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	
Spinning positions	**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

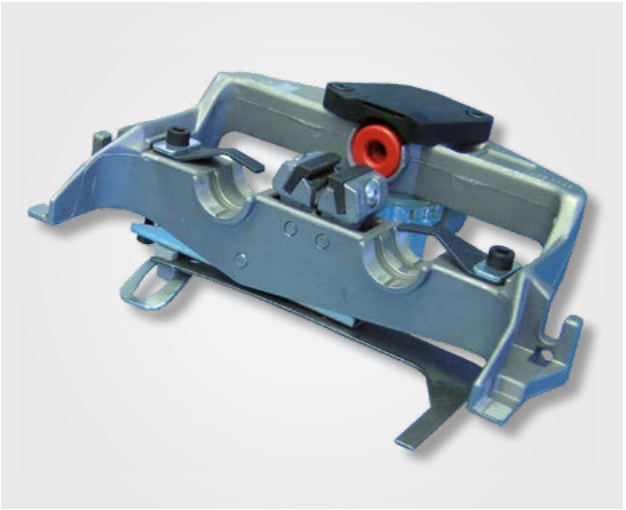
SE 9 Performance Kit

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 *Pro*FiL Cartridge
- *Pro*FiL 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 number 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.

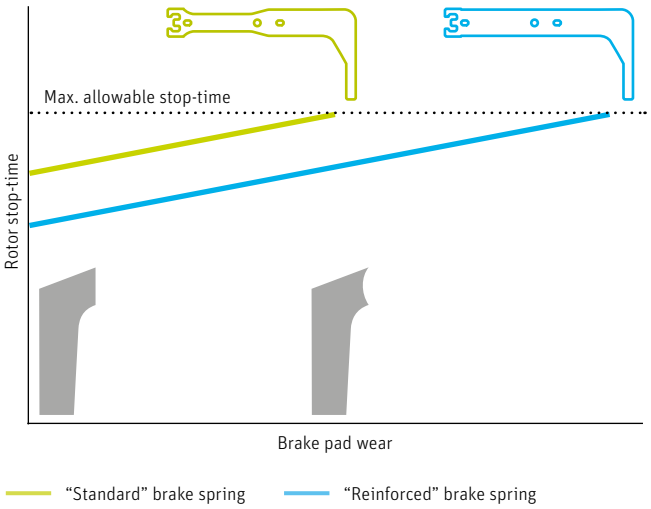


Fig. 1

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 *Pro*FiL 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.

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%.

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 ≙ 28 kWh – only for the TwinDisc drive.

Energy consumption of TwinDisc bearing unit
with different Leaf Springs

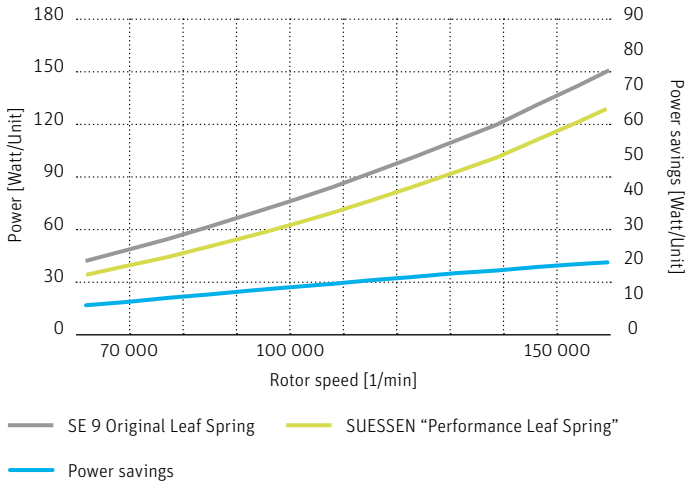


Fig. 2

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 ≙ 4.6 kWh less power consumption for the same a.m. example machine (see ligh 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

10487815	10386594	10656672	957.7527
Thrust-bearing modernization with *Pro*FiL Cartridge	*Pro*FiL 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

954.1133
Centring gauge
SE 7/8/SQ 7/8

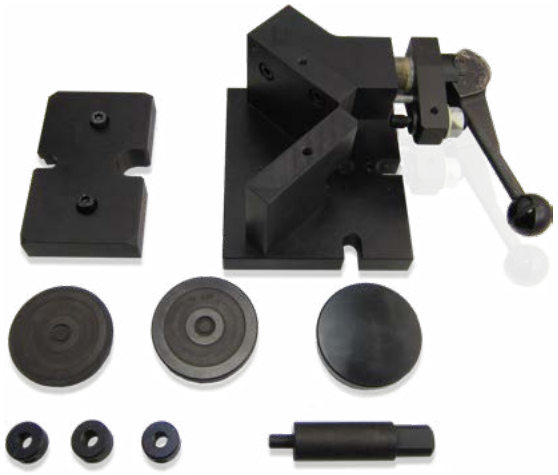
954.1406
Centring gauge
SE 9/10/SQ 9

954.1134
Centring cone
SE 7/8/9

957.5227
Centring cone
SE 10/SQ

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

TwinDisc Maintenance



10658890	**10637156**	**955.5589**
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

954.6279	**954.3169**
Grease gun	Bush

954.3635	**954.3636**	**10670979**	**956.9273**
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	

956.9274	**956.9275**	**954.3649**
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

Setting gauge 8.0

SE 9-12/SC/SQ

for hybrid bearing

958.4661

Setting gauge 8.3

SE 9-12

for magnetic bearing

955.2286

Wedge for brake spring

SE 9/10/SC/SQ 9

954.7588

Adjusting device brake

SE 9/10/SC/SQ

956.5830

Mounting device

TwinDisc thrust bearing unit

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

954.0592

Tool oil container

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

954.0592

Little hook for reflector

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

953.9200

Centring gauge for thrust bearing housing

SE 7/8/SQ 7/8

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

10231133

Clamping device for opening roller

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

10555212

Vacuum gauge complete

10554477

Hose

954.1394

Mounting tool Torque Stop

SE 9/10/SC/SQ

954.3648

Tool for navel

SE 7/8/9

957.5688

Mounting tool for navel

SE 10/11/12/SC/SQ

959.3086

Mounting tool Bypass SC/SQ

958.3503

Tool for locking lever

SC/SQ

10266390

Mounting tool for opening roller

SC/SQ

958.5741

Rotor for adjustment

Piecer carriage

SE 9/10/SC/SQ 9

954.0593

Key for press roller suspension

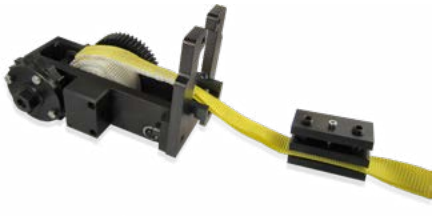
SE 7/8/9/10/11/12/SC/SQ

954.1995

Eccentric key

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

Special Tools



957.9940

Installation device tangential belt rotor

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

957.9959

Belt

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

958.5050

Tool clearer SC

959.2435

Flanged bolt SQ

959.2437

Draw-off screw SQ

289.4203

Press

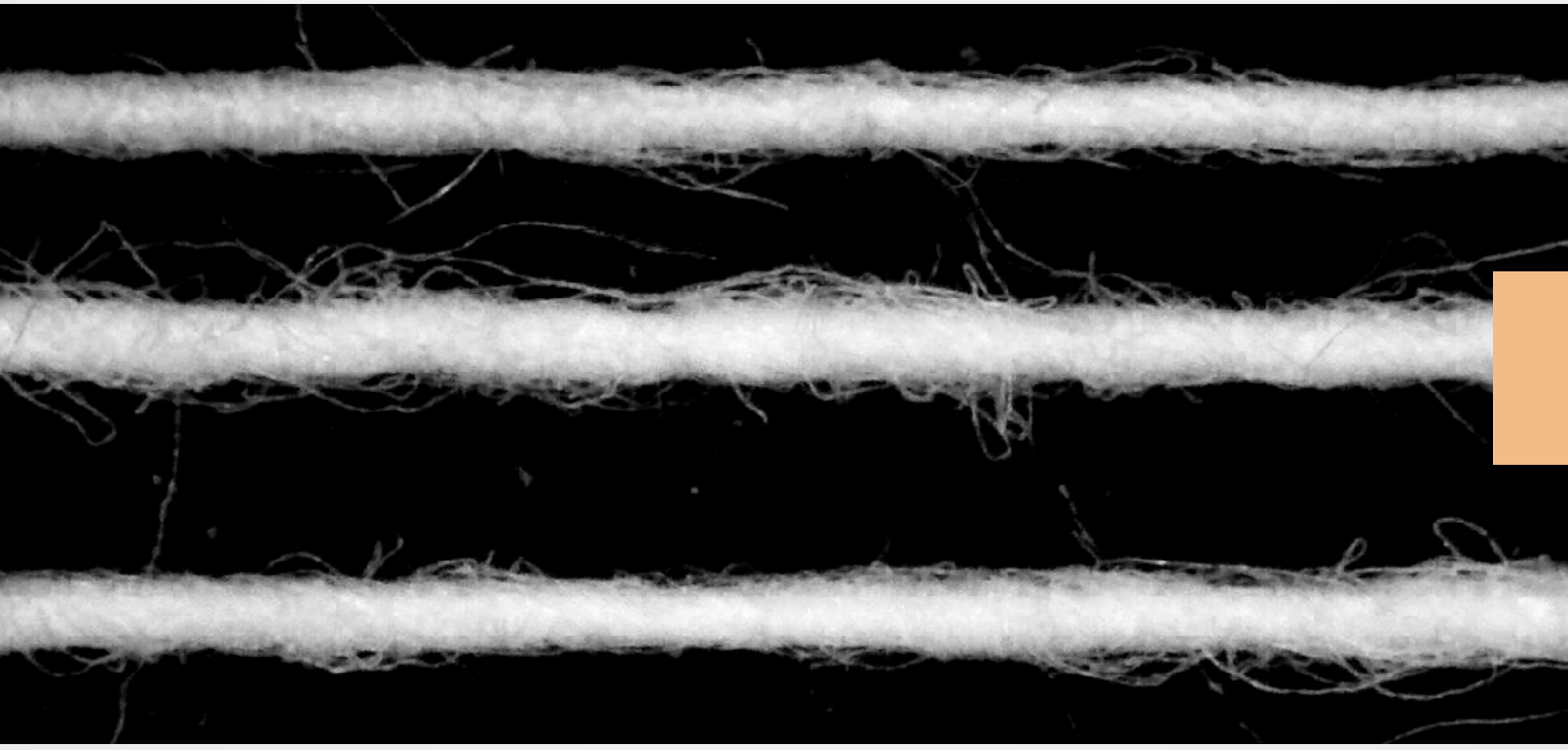
959.2439

Press with supporting plate

959.2525

Supporting plate complete

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

		Knitting yarn	Weaving yarn standard	Denim yarn
Spinning component		**Type**		
Rotor		G GSQ S	T K	TC U S
SOLIDRING		B 174 B 20	B 174 B 20	B 174
Navel	High speed	*Pro*FiL 6 *Pro*FiL SM	*Pro*FiL S *Pro*FiL 6 *Pro*FiL SM	*Pro*FiL S
	Normal speed	KN4 KN8 KS M KS R4 KS 2R4 KN4 R4 KN4 2R4 KN8 R4	KS KN4 KN8 KS M	KS KN KN3 KN4
Torque Stop		Clip white Clip black	Clip white Clip red	Clip green

Blends like PES/cotton

		Knitting yarn	Weaving yarn standard	Denim yarn
Spinning component		**Type**		
Rotor		G S	T	TC U S
SOLIDRING		S 21 S 25	S 21	S 21 S 25
Navel	High speed	*Pro*FiL 6	MIMA 2	*Pro*FiL 4
	Normal speed	*Pro*FiL 4	MIMA 1	KN3 KN4
Torque Stop		Clip white Clip red	Clip white Clip red	Clip green

Regenerates

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

Viscose

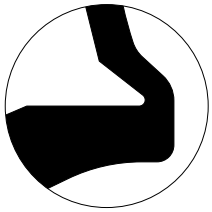
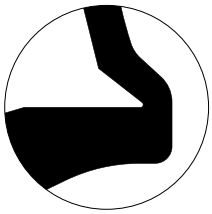
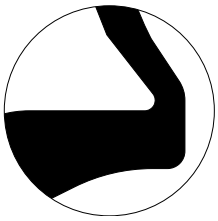
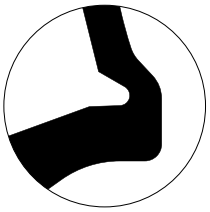
		Knitting yarn	Weaving yarn standard
Spinning component		**Type**	
Rotor		T T and K with B5 G	T T and K with B5 K
SOLIDRING		B 174 B 187	B 174 B 187
Navel	High speed	*Pro*FiL 4	*Pro*FiL 4 MIMA 2 *Pro*FiL S
	Normal speed	*Pro*FiL 4	*Pro*FiL 4 *Pro*FiL SM
Torque Stop		Clip white Clip red	Clip red Clip green

Polyester/acrylic

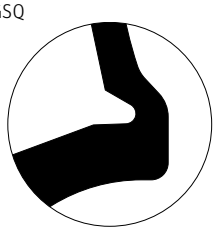
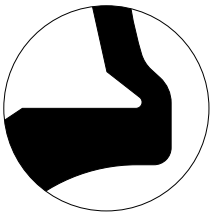
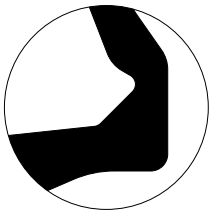
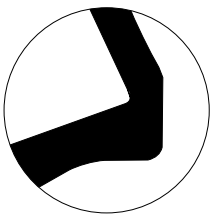
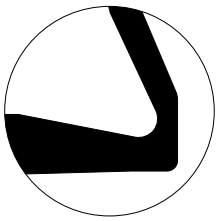
		Knitting yarn	Weaving yarn standard	Denim yarn
Spinning component		**Type**		
Rotor		G S	T TC	TC U S V
SOLIDRING		S 21 S 25 S 43-3,6	S 21 S 25 S 43-3,6	S 21 S 25
Navel	High speed	*Pro*FiL 6	MIMA 2	MIMA 2
	Normal speed	*Pro*FiL 4	MIMA 1	MIMA 1
Torque Stop		Clip red Clip green	Clip red Clip green	Clip red Clip green

Rotors

Rotor characteristics

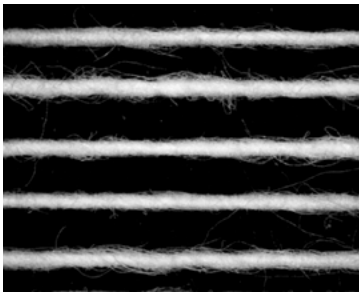
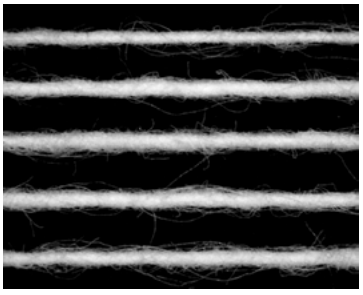
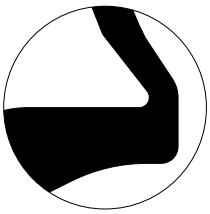
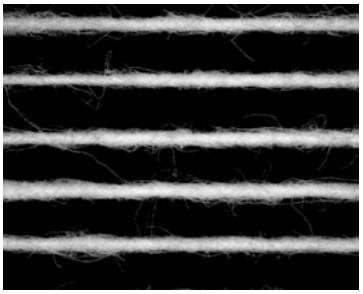
Rotor Type	Characteristics	Knitting yarn	Weaving yarn standard	Denim yarn	Cotton	Blends like PES/cotton	Regenerated fibres	Viscose	PES/PAC
T 	• universally applicable • good yarn values • for smooth yarns • no tendency to random point-like contamination of the rotor groove • less moiré faults • compact yarn • high yarn strength	○	●	○	●	●	●	●	●
T and K with B5 	• preferably Ne 20 and finer • compact yarn • for smooth yarns	●	●					●	
TC 	• preferably Ne 10 and coarser • for denim yarns • in case of regenerates also for knitting and weaving yarns • high-bulk yarns • other coarse yarns • good yarn values • good spinning stability • no tendency to random point-like contamination of the rotor groove, • less moiré faults • compact yarns • better effect in case of fancy yarn equipment	○	○	●	●	●	●		●
G 	• universally applicable • very good spinning stability • for bulky yarns • tendency to random point-like contamination of the rotor groove • increased tendency to moiré faults • clean cotton • synthetic fibres	●			●	●		●	●

● = recommended
○ = possible

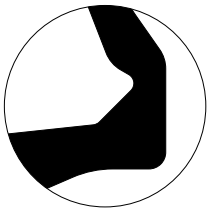
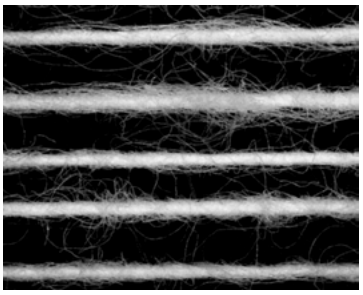
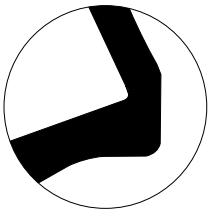
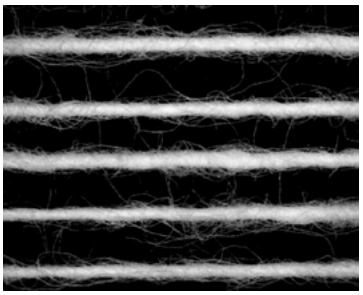
Rotor Type	Characteristics	Knitting yarn	Weaving yarn standard	Denim yarn	Cotton	Blends like PES/cotton	Regenerated fibres	Viscose	PES/PAC
GSQ 	• preferably Ne 16 and finer • very good spinning stability • better yarn strength (versus G) • for bulky yarns • tendency to random point-like contamination of the rotor groove • tendency to moiré faults • clean cotton	●			●				
K 	• preferably Ne 20 and finer • good yarn values • for smooth yarns • less moiré faults	○	●		●			●	
U 	• preferably Ne 10 and coarser • high yarn bulk • relatively irregular yarn • low snarling tendency			●	●	●	●		●
S 	• for coarse yarn counts • high yarn bulk • for highly contaminated material • low snarling tendency • raised yarns	●		●	●	●	●		●
V 	• particularly suitable for synthetic fibres • good resistance to fibre shifting for yarns made of PAC or PES			●					●

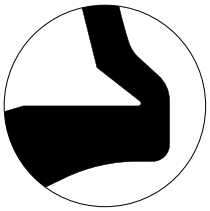
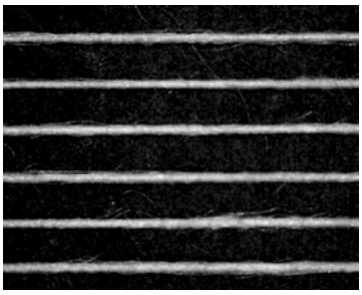
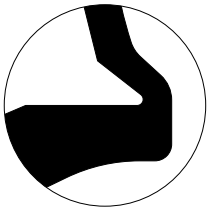
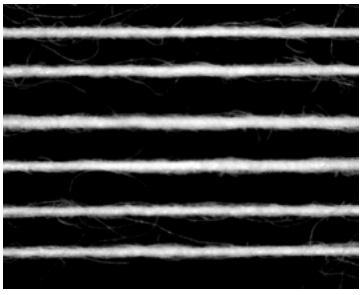
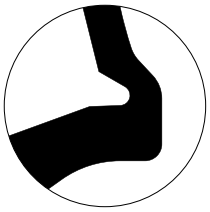
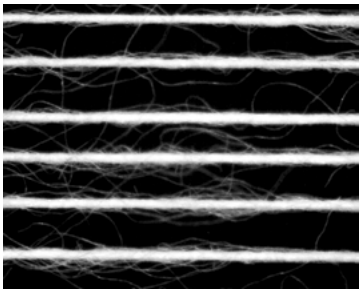
● = recommended
○ = possible

Yarn characteristics

Rotor groove	Black board	Yarn characteristics
T ≙ K 		• compact yarn • low hairiness • high yarn strength • snarling tendency
G ≙ GSQ 		• bulky yarn • soft hand • reduced yarn strength
TC 		• compact yarn • low hairiness • high yarn strength • snarling tendency

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

Rotor groove	Black board	Yarn characteristics
U 		• irregular yarn • tenacity lower than with T and TC • low tendency towards snarling
S 		• irregular yarn • corkscrew structure • yarn slightly more compact than with U

Rotor groove	Black board	Yarn characteristics
B5 		• very compact yarn • lowest hairiness level • harsh hand
T 		• compact yarn • slight hairiness • yarn more bulky than with B5 • harsh hand
G 		• bulky yarn • higher basic hairiness • soft hand

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

Coatings

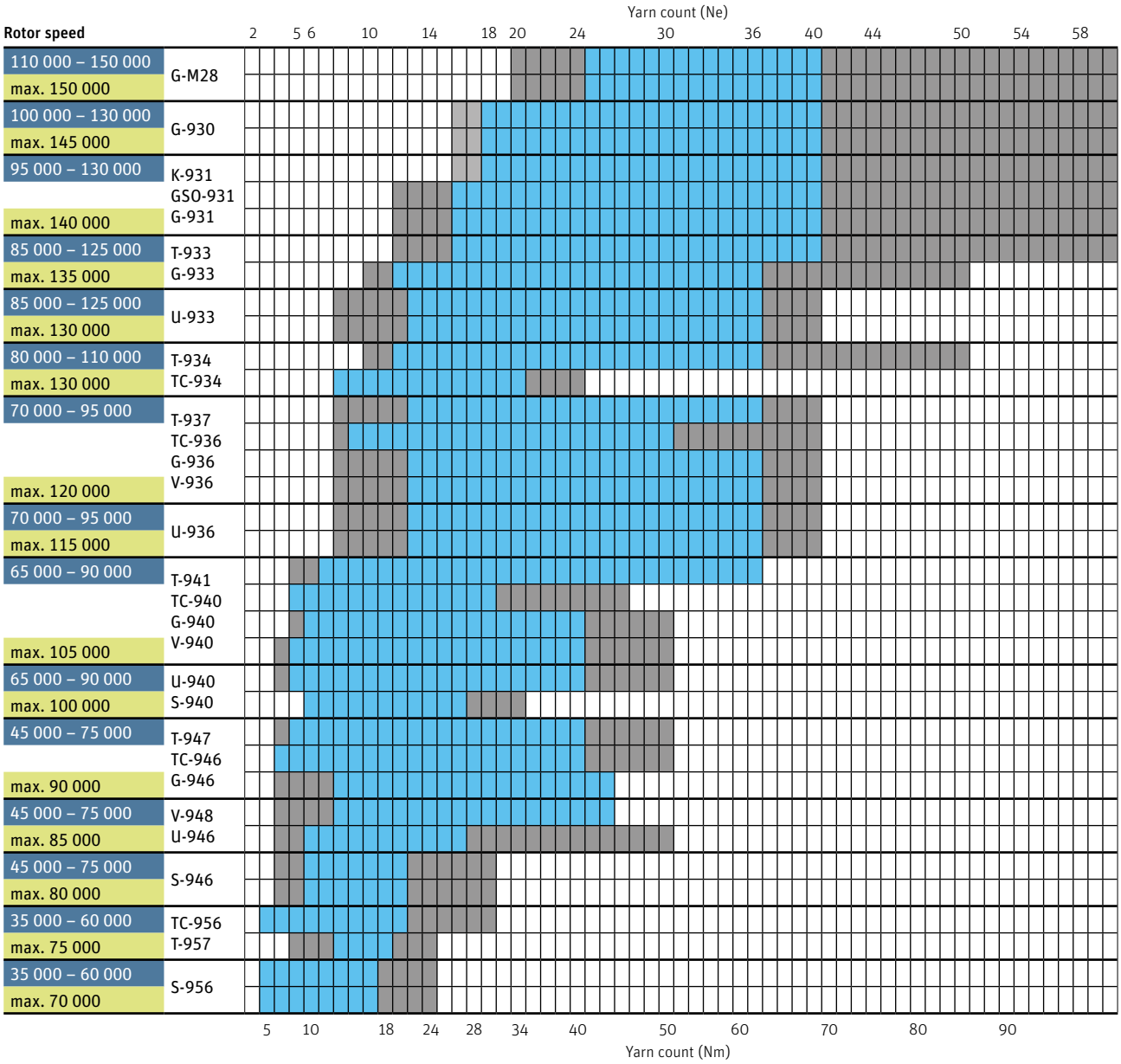
B = Boronized
High wear protection, slightly lower yarn values, easy cleaning even of sticky material

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 = Ematal-coated
Special coating for rotor plates of aluminium, yarn characteristics comparable with boronized rotors

Rotor speed and yarn counts



Technological recommendation

Mechanically possible

Possible yarn count range

Proven yarn count range

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

Channel plate SE 7/8/9		**KP 31 F KP 31 U**	**KP 33 F KP 36**		**KP 40 KP 40 F**	**KP 46**	**KP 56**
Channel plate adapter SE 10	**28**	**31**		**36**	**40**	**46**	**56**
Channel Insert SC/SQ	**28**	**31**			**40**	**46**	
Adapter SE 11 – 20	**28**	**31**		**36**	**40**		
Rotor ⌀							
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 	• Aggressive sickle shape • Intensive opening action • Very good fibre separation • Good wear properties of the teeth • High trash extraction • Not suitable for man-made fibres	●	●	●	●			●	
B 174-4,8 	• Aggressive sickle shape with extended tooth pitch • Opening action more gentle than with B 174 • Highly suitable for **blends of cotton/linen** • Good fibre release into fibre channel • Not suitable for man-made fibres	●	●	●	●				
B 187 	• Highly aggressive sickle shape • Intensive opening action • Preferrably for fine yarn counts < 29 tex, > Nm 34, > Ne 20 • Not suitable for man-made fibres	●	●					●	
B 20 	• Aggressive straight tooth • Intensive opening action • Bad wear properties of the teeth • High trash extraction • Not suitable for man-made fibres • Preferrably for fine yarn counts < 29 tex, > Nm 34, > Ne 20	●	●		●				

● = 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 	• Slightly aggressive straight tooth • Gentle opening action for man-made fibres • Good fibre release into fibre channel	●	●	●		●	●		●
S 25 	• Unaggressive tooth shape • For very coarse yarn counts with large mass of fibres • Gentle opening action • Very good fibre release into fibre channel • No tendency towards merry-go-round fibres • No tendency towards lapping • Supports short, non-reproducible yarn effects	●		●		●	●		●
S 43-3,6 	• Slightly aggressive, straight, short tooth • Gentle opening action • Very good fibre release into fibre channel • No tendency towards merry-go-round fibres • No tendency towards lapping • Almost no dust • For high-end yarns	●	●						●

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

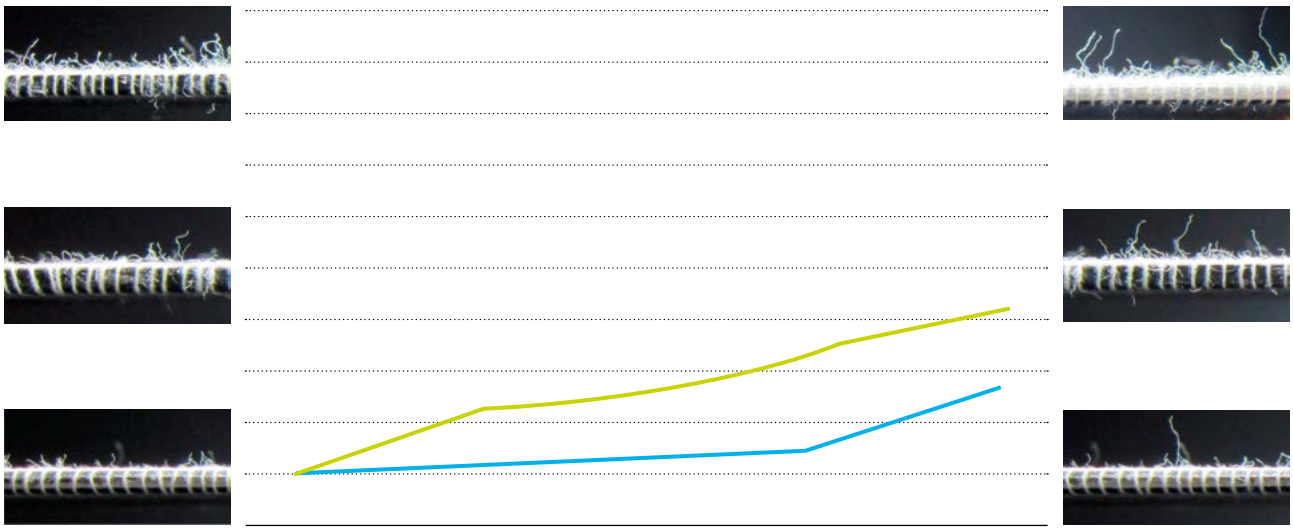
In knitwear applications, a soft hand of the knitwear, bulky yarns and high covering properties are preferred. Depending on the fibre material long hairs can produce undesirable pilling effects.

Yarn characteristic by navel type
Weaving yarn using the example of 100% cotton

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



High take-off speed

*Pro*FiL S | *Pro*FiL 6 | *Pro*FiL SM

Normal take-off speed

KS | KN3 | KN4 | KN8 | KS M

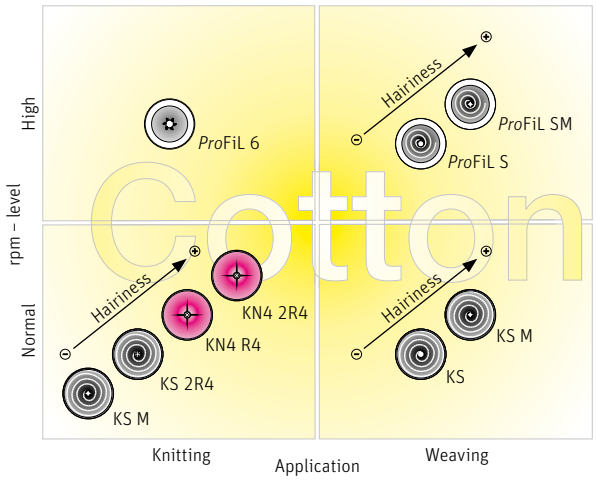
Navels

*Pro*FiL 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). *Pro*FiL 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.

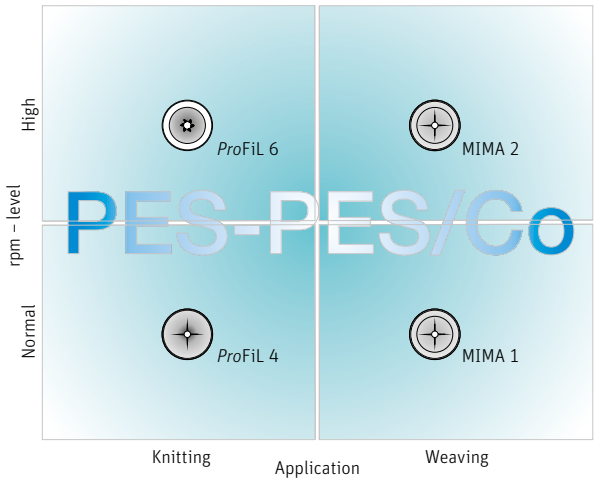
In weaving applications long hairs in particular disturb the downstream processes. If smooth yarns are required, the spiral navels KS and *Pro*FiL S are preferably used. A higher percentage of short hairs improves for example the efficiency of air jet looms. The KS M and the *Pro*FiL SM navels provide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



PES and PES/Cotton diagram

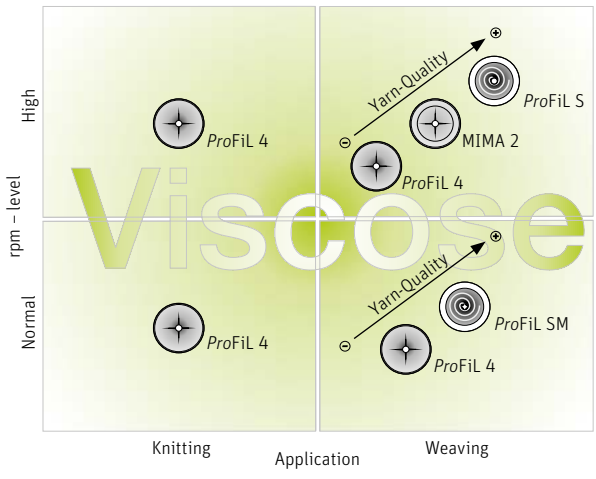
In knitwear applications the *Pro*FiL Navels minimize the thermal damage to the PES fibres, due to the smooth surface. While the *Pro*FiL 4 navel permits spinning at normal speed, the *Pro*FiL 6 navel minimizes thermal damages at high speeds owing to its smaller support area. The resulting hairiness 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 *Pro*FiL 4 navel is universal. The *Pro*FiL 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
Clip green 	• Smooth Torque Stop • No additional twist-retaining effect • S3 hairiness not influenced • Application: flat yarns with warp twist			○	●	
Clip red 	• Torque Stop with 3 soft twist-retaining ribs • Increased twist-retaining effect • S3 hairiness slightly increased • Reduced ends-down and possible reduction of twist coefficient		●	●	○	
Clip white 	• Torque Stop with 3 sharp twist-retaining ribs • Intensified twist-retaining effect • Increased S3 hairiness • Reduced ends-down and possible reduction of twist coefficient	●	●	●	○	●
Clip black 	• Torque Stop with 3 aggressive, sharp twist-retaining ribs • High twist-retaining effect • S3 hairiness strongly increased • Reduced ends-down and possible reduction of twist coefficient	○				●
TS 37 	• Intensified twist-retaining effect • Comparable with white Torque Stop • Increased hairiness • Tendency to clogging	○				○

● = 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
SOLIDRINGS without diamond-coating (1)			
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
SOLIDRINGS with diamond-coating			
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
S 21 DN S 25 DN	Cotton	10 000 kg or 20 000 h	30 000 h
	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
SOLIDRINGS with chromium-coating (2)			
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
*Pro*FiL 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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