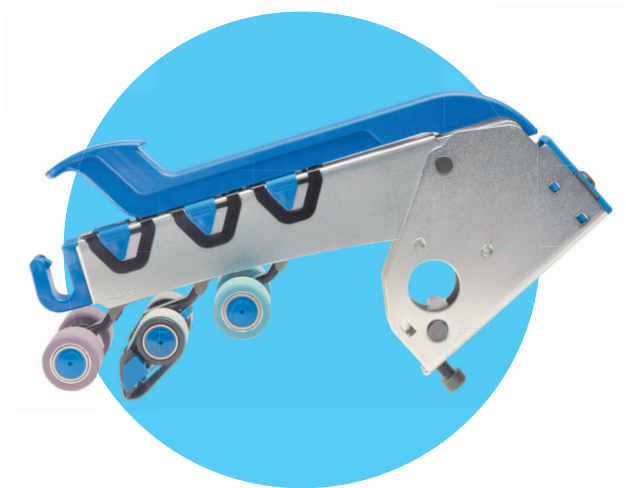


SAURER.



2019

Product Information.

Texparts and Accotex Components

SAURER.



The Saurer Group is a leading globally operating technology group focusing on machinery and components for yarn processing. As a company with a long tradition, Saurer has always been a leader in innovation. Today, Saurer comprises the two segments Saurer Spinning Solutions and Saurer Technologies.

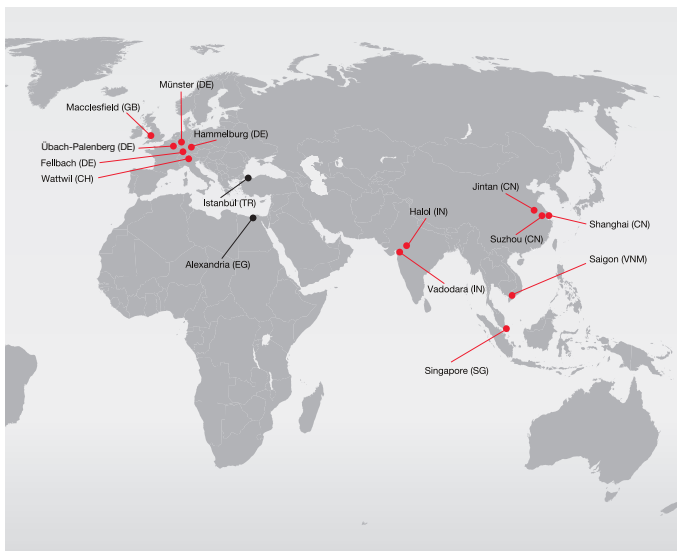
Saurer Spinning Solutions offers high quality, technologically advanced and customer-specific automation solutions for processing staple fibre from bale to yarn. Saurer Technologies specialises in twisting and embroidery as well as engineered and polymer solutions.



ABOUT SAURER SPINNING SOLUTIONS

The Spinning Segment supports customers with solutions for staple fibre processing from bale to yarn. The portfolio includes machines, components, service, systems and automation for the processing of all staple fibres. Schlafhorst and Zinser are leading in staple fibre spinning and together with Jintan offer solutions from spinning preparation to winding.

Components from Accotex and Texparts ensure excellent yarn quality and maximum productivity. For decades, we have been the trailblazer in our industry. Our products set milestones for energy consumption, economics and ergonomics.



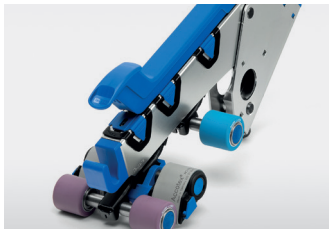
About Saurer Accotex

Since 1911, Accotex Cots and Aprons have been made to meet the highest quality and service demands for textile mills around the world. Produced from the latest polymer and with state of the art production technology, we produce a consistent product for every order placed. Accotex works closely in collaboration with textile research institutes and machine manufacturers to stay ahead of new industry developments and trends earning its reputation for superior quality by helping produce better yarn for better fabrics.

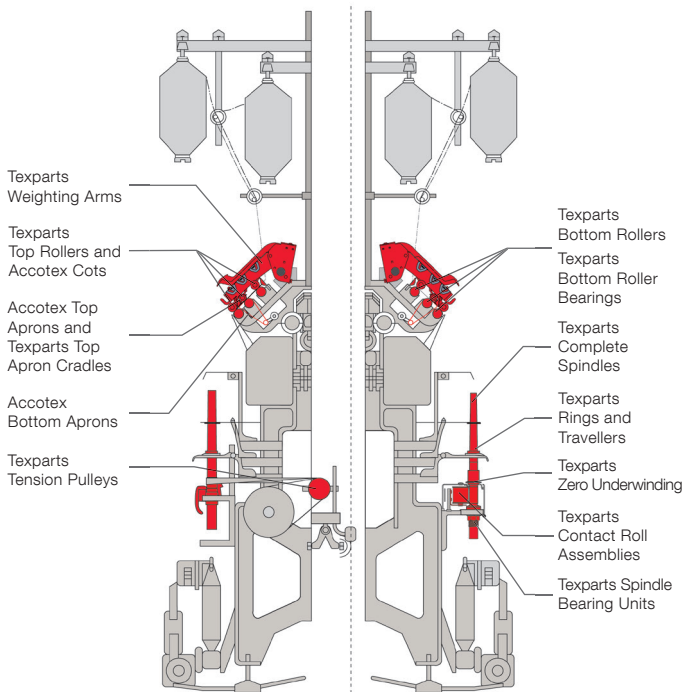


About Saurer Texparts

Texparts offers high quality components for the textile industry including drafting systems and spindles, spinning rings and travellers as well as bearings for the Ring Spinning and Rotor Spinning area, winders and twisters. As part of the Saurer Spinning Solutions GmbH & Co. KG, Texparts is a world-class partner for its customers in the field of mechanical engineering for spinning machines as well as for its customers in the spinning mills.



saurer.com



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SPINDLE UNITS

**Spindle
Bearing Units
for Spinning and
Twisting Spindles**

**Spindle
Lubricating
Apparatus with
Accessories**

Rings & Travellers





SPINDLE BEARING UNITS CS SERIES GENERAL INFORMATION

Application

CS Series

spindle bearing units are designed for use on short staple and long staple ring spinning machines.

Moreover, the application in ring twisting machines is possible, too.

Texparts supplies the CS series with different flange versions, with and without hook and brake, ready to be installed, for all types of ring spinning machines. CS versions without flange are also available.

CS spindle bearing units are usually delivered complete with housing and flange. The flange dimensions match the individual requirements of the respective customer. Additional elements such as hooks, inner locking devices, nuts, washers and brakes can be supplied on customers' request. Texparts also supplies complete spindles consisting of spindle lower parts and spindle upper parts.

The spindle bearings are sealed with a dust-tight cap and are normally supplied without oil filling. They must be filled with oil according to our instruction before they are first put into service. On special request the spindle bearing can be supplied filled with oil and can be distinguished by a black cap.

Ring spinning machines

Cotton mills
Worsted mills





The CS spindle bearing units are based on two bearing assemblies: a neck bearing unit and a footstep bearing unit.

The complete separation of the neck bearing unit from the footstep bearing unit allows an efficient damping of the spindle vibrations. Thus a mutual interference of the two units is avoided. Both units are mounted in the housing.

The threaded flange is pressed onto the housing and is used for accurate positioning and attachment of the spindle bearing on the spindle rail.

The design of the threaded flange is matched according to customers' specifications.

The neck bearing unit includes a very precise and robust roller bearing.

The footstep bearing unit is responsible for the elastic centering and damping of the spindle shaft. Two centering and spring elements are guiding the bearing sleeve in a symmetrical way.

The oil-filled damping system is also located symmetrically to the footstep bearing for optimized damping. The footstep bearing safely withstands vertical loading and doffer forces.



SPINDLE BEARING UNITS CS 1

Application

CS 1

spindle bearing units are designed for use on spinning spindles on short staple and long staple ring spinning machines with spindle speeds up to 25.000 rpm.

Moreover, the application in ring twisting machines is possible, too.

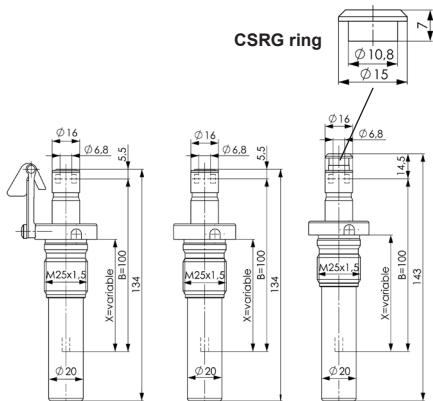
See also chapter 10, page 2.

For lubrication see chapter 9, page 6-13.

Ring spinning machines

Cotton mills
Worsted mills

Chapter 1-4



CS 1-
Version
with hook

CS 1-
Version
hookless

CS 1-
Version with
inner locking

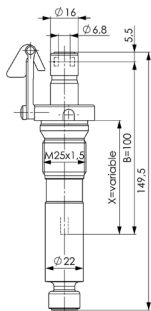


Cylindrical
footstep
shape with
spherical tip

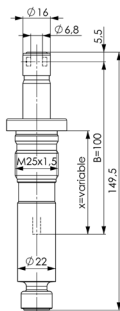
4,5

The spare part Ref. no. of the **locking ring** for the spindle version with inner locking is 1257 888 (standard version: grey) and 1258 576 (Rieter version: white). An appropriate **unlocking lever** can be supplied upon request.

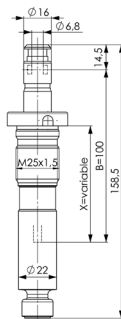
SPINDLE BEARING UNITS CS 1 S



**CS 1 S-
Version
with hook**



**CS 1 S-
Version
hookless**



**CS 1 S-
Version with
inner locking**

Application

CS 1 S

spindle bearing units are designed for use in spinning spindles on short staple and long staple ring spinning machines with spindle speeds up to 30.000 rpm. Due to the flexible neck bearing, the CS 1 S operates as an extremely quiet spindle over the entire speed range.

See also chapter 10, page 3.

For lubrication see chapter 9, page 6-13.

The indicated types are examples for the possible design of CS 1 S.

The relevant flange dimensions are adjusted to the relations of dimensions of each specific ring spinning machine.

Ring spinning machines

**Cotton mills
Worsted mills**



SPINDLE UNITS CS1 12

Application

Spindle unit CS1 12
-compact spindle bearing
unit - for spinning spindles
in cotton and worsted ring
frames for coarse yarns
as well as for spinning
with suppressed yarn
ballon and for spinning
with big tube sizes.

See also chapter 10, page 2.

For lubrication see chapter
9, page 6-13.

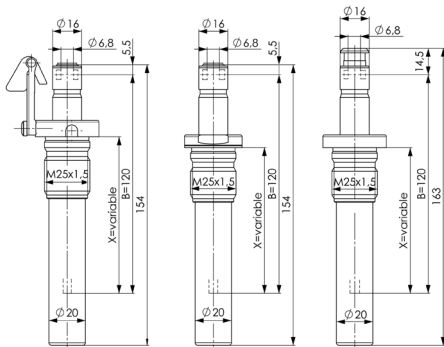
The spare part ref. no. of
the **locking ring** for the
spindle version with inner
locking is 1257 888. An
appropriate **unlocking**
lever can be supplied
upon request.



CSRG ring

Ring spinning machines

Cotton mills
Worsted mills



**CS1 12 -
Version
with hook**

**CS1 12 -
Version
hookless**

**CS1 12 -
Version with
inner locking**

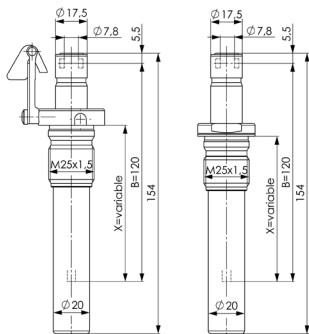
The **CS1 12** differs from the standard
spindle bearing unit of CS1 series by
a bearing distance of 120 mm (dimen-
sion B). The indicated types are ex-
amples for the possible design of
CS1 12.

The CS1 12 can be supplied with
different flange versions, with and
without hook and brake, ready to be
installed, for all types of ring spinning
machines. The relevant flange dimen-
sions are adjusted to the relations
of dimensions of each specific ring
spinning machine.



Cylindrical foot-
step shape with
spherical tip

SPINDLE UNITS CS21 12



**CS21 12 -
Version
with hook**

**CS21 12 -
Version
hookless**

Cylindrical
footstep
shape with
spherical tip



Application

Spindle unit CS21 12 is designed for use in spinning spindles on short staple and long staple ring spinning machines with spindle speeds up to 22.000 rpm for manufacturing coarse yarns (e.g. worsted and denim yarns), for spinning with suppressed balloon, and for spinning with large tube sizes.

See also chapter 10,
page 2.

For lubrication see
chapter 9, page 6-13.

The **CS21 12** is designed for spindle upper parts with shaft diameter 7.8 mm thus resulting in a reinforced neck bearing. The increased dimension for shaft and neck bearing – bearing distance B of 120 mm – withstands higher loads and therefore qualifies the CS21 12 for spinning with larger tubes.

Ring spinning machines

**Cotton mills
Worsted mills**



COMPLETE SPINDLES

Application

For spinning and twisting processes.

Texparts offers a comprehensive range of complete spindles for various kinds of spinning and twisting processes:

- Cotton spindles with bare blades or with aluminium plugs
- Worsted or semi-worsted spindles with or without spinning crowns resp. spinning fingers
- Spindles for draw twisters, for small cop sizes
- Spindles for twisting frames

All spindles are being optimized considering

- the tubes to be used,
- the type of spindle drive,
- the minimum and maximum speed required and
- other customers' demands.

The spindles will be equipped with the most suitable spindle bearing unit. Furthermore, a wide-ranged variety of different flange-, brake- and locking types as well as other spindle accessories are available. Highest precision in manufacture as precondition for a steady and vibration-reduced operation as well as a long-lasting service life of the spindle are guaranteed.

Complete spindles supplied by Texparts are high-tech products. The efficiency of each spindle speaks for itself:

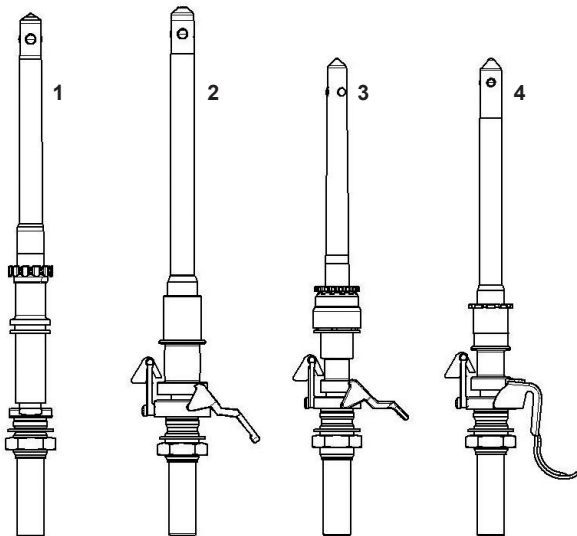
- reduction in energy requirements and running noise
- high spindle speeds up to 30.000 rpm
- low-vibration running
- minimization of spindle oscillations

Cotton mills
Worsted mills
Twisting mills

Please ask for Texparts questionnaire for complete spindle inquiries.



Some examples of light spinning and twisting spindles:



- 1: Spindle with aluminium adapter for tangential belt drive
- 2: Spindle with aluminium adapter for tape drive
- 3: Spindle with Zero Underwinding for tape drive
- 4: Spindle with aluminium adapter for tape drive



ZERO UNDERWINDING 12 BALL (ZUW)

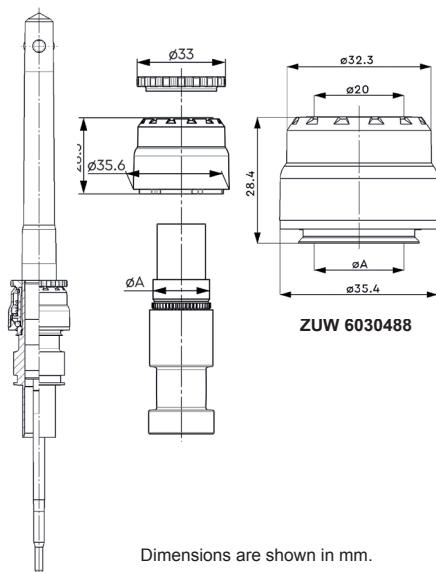
Application

For ring spinning. Suitable for all spindles size 1. It also offers excellent cutting performance for specialty yarns such as Lycra.

The ZUW lifecycle is approx. 3 years.

Types Ref.no.	For wharve diameter (ϕA)	Opening speed	Closing speed
6030 488	20	8.000 ± 500 rpm	2.500 ± 400 rpm
6029 136	21	8.000 ± 500 rpm	2.500 ± 400 rpm

Spindle with Zero Underwinding (ZUW):



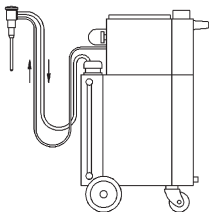
Ring spinning machines

Cotton mills
Worsted mills

ELECTRICAL SPINDLE LUBRICATING APPARATUS



Type Ref.no.	Voltage	Product
1254 106	1 x 230 V	Lubricating apparatus with an electrically driven pump
6032 195	1 x 110 V	



Dimensions in mm:

Length: 450; Width: 380; Height: 720
Weight: 29 kg net

Electric drive:

The Texparts spindle lubrication apparatus is available with electric drive 1x230 V and 1x110 V. Please specify.

Note:

The standard supply of the spindle lubricating apparatus does not include any adapter. These have to be ordered as separate items. For Ref. No. of adapters see page 1-13.

Application

Electrical lubricating apparatus 1254 106 (230 V) or 6032 195 (110 V) for servicing Texparts spindle bearing units CS, HF, HZ and SF.

See also chapter 9,
page 10-13.

Ring spinning machines
Twisting machines

Cotton mills
Worsted mills
Twisting mills



MANUAL SPINDLE LUBRICATING APPARATUS

Application

Manual lubricating apparatus 6018 613 for servicing Texparts spindle bearing units CS, HF, HZ and SF.

See also chapter 9, page 10-13.

Ring spinning machines
Twisting machines

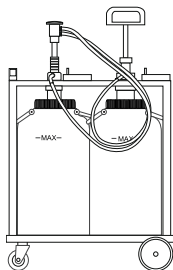
Cotton mills
Worsted mills
Twisting mills

Type Ref.no.

6018 613

Product

Manual lubricating apparatus with a manual pump



Dimensions in mm:

Length: 590; Width: 380; Height: 800

Weight: 18 kg net

Volume of oil containers:

Clean and waste oil container: 20 l each

Lubricating hydraulics:

Max. pressure: 10 bar (manual pump)

Note:

The standard supply of the spindle lubricating apparatus does not include any adapter. These have to be ordered as separate items. For Ref. No. of adapters see page 1-13.

LUBRICATION ADAPTERS AND ACCESSORIES FOR TEXPARTS SPINDLE BEARING UNITS CS + SF



Adapter Ref.no.	Suitable for spindle types	
1253 181	CS 1 ^{1) 4)}	CS 1 S ^{1) 4)}
6012 307	CS 1 ^{1) 5)}	CS 1 S ^{1) 5)}
1253 182	CS 1 ^{2) 4)}	CS 1 S ²⁾
6012 528	CS 1 ^{2) 5)}	CS 1 S ^{2) 5)}
6021 712	CS 21 12 ¹⁾	
1256 450	CS 1 12 ¹⁾	CS 1 S 12 ¹⁾
1256 451	CS 1 12 ²⁾	CS 1 S 12 ²⁾
0019 983	SF 100	
1260 233 ^{3) 4)}	SF 210	
6001 019 ^{3) 5)}		

Application

Lubrication adapters for lubricating apparatus 1254 106 and 6018 613 for servicing Texparts spindle bearing units CS and SF.

- 1) Standard version
- 2) Version with inner locking
- 3) Replacement for adapters 0994 250, 0034 279 and 0992 952
- 4) Long version
- 5) Short version

See also chapter 9, page 6-13.

Ring spinning machines Twisting machines

Cotton mills
Worsted mills
Twisting mills



RINGS AND TRAVELLERS

Application

Spinning rings for application in ring spinning machines.

Ring dimensions in mm (d * D * h)

Flange 1 (b = 3.2 mm)

36 * 47 * 8	32 * 51 * 10	35 * 54 * 10	48 * 57 * 10
38 * 47 * 8	35 * 51 * 10	36 * 54 * 10	38 * 60 * 10
36 * 48 * 9	36 * 51 * 10	36 * 54 * 8	42 * 60 * 10
38 * 48 * 9	38 * 51 * 8	38 * 54 * 10	45 * 60 * 10
40 * 48 * 9	38 * 51 * 9	38 * 54 * 8	48 * 60 * 10
41 * 48 * 9	38 * 51 * 10	40 * 54 * 8	51 * 60 * 10
42 * 48 * 9	40 * 51 * 8	40 * 54 * 9	
	40 * 51 * 9	40 * 54 * 10	
	40 * 51 * 10	41 * 54 * 9	
	41 * 51 * 9	42 * 54 * 8	
	42 * 51 * 8	42 * 54 * 9	
	42 * 51 * 9	42 * 54 * 10	
	42 * 51 * 10	45 * 54 * 9	
	45 * 51 * 9	45 * 54 * 10	

Ring spinning machines

Cotton mills Worsted mills

If a required ring is not listed please contact us.

RINGS AND TRAVELLERS

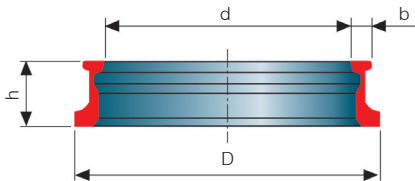


Flange ½ (b = 2.6 mm)

32 * 51 * 10	36 * 48 * 9	38 * 54 * 10	42 * 51 * 10
35 * 51 * 10	38 * 48 * 9	38 * 60 * 10	42 * 54 * 10
35 * 54 * 10	38 * 51 * 10	40 * 54 * 10	

Flange 2 (b = 4.1 mm)

42 * 54 * 10	45 * 54 * 10	51 * 60 * 10
--------------	--------------	--------------



b = flange width D = fitting Ø
d = inside ring Ø h = ring height

Application

Spinning rings for application in ring spinning machines.

If a required ring is not listed please contact us.

Ring spinning machines

Cotton mills
Worsted mills



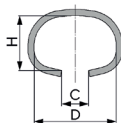
C SERIE TRAVELLERS COTTON AND POLYESTER CP 1 HF / FOR FLANGE 1

Application

Marathon Traveller

Chemical deposit plating for compact yarn and for all applications in which longer lifetime is required. The optimum quality for a higher performance.

All Texparts Travellers are available in boxes of 5.000 pcs.



No.	D mm	H mm	C mm
1 - 5	4.60	3.05	1.50
1/0 - 9/0	4.40	2.80	1.48
10/0 - 15/0	4.20	2.80	1.45

Wire section: half-round

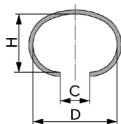
No.	Weight per 100 pcs in g
5	9.50
4	9.00
3	8.00
2	7.10
1	6.30
1/0	5.60
2/0	5.00
3/0	4.50
4/0	4.00
5/0	3.55

No.	Weight per 100 pcs in g
6/0	3.15
7/0	2.80
8/0	2.50
9/0	2.36
10/0	2.24
11/0	2.00
12/0	1.80
13/0	1.70
14/0	1.60
15/0	1.50

Ring spinning machines

Cotton mills
Worsted mills

C SERIE TRAVELLERS COTTON CC 1 HF / FOR FLANGE 1



No.	D mm	H mm	C mm
1 - 5	4.83	3.16	1.62
1/0 - 15/0	4.00	2.78	1.40
16/0 - 23/0	4.00	2.78	1.40

Wire section: half-round

No.	Weight per 100 pcs in g
5	9.50
4	9.00
3	8.00
2	7.10
1	6.30
1/0	5.60
2/0	5.00
3/0	4.50
4/0	4.00
5/0	3.55
6/0	3.15
7/0	2.80

No.	Weight per 100 pcs in g
8/0	2.50
9/0	2.36
10/0	2.24
11/0	2.00
12/0	1.80
13/0	1.70
14/0	1.60
15/0	1.50
16/0	1.40
17/0	1.32
18/0	1.25
19/0	1.12
20/0	1.00
22/0	0.90

Application

Marathon Traveller

Chemical deposit plating for compact yarn and for all applications in which longer lifetime is required. The optimum quality for a higher performance.

All Texparts Travellers are available in boxes of 5.000 pcs.

Ring spinning machines

Cotton mills
Worsted mills



C SERIE TRAVELLERS COMPACT / COTTON CK 1 HF / FOR FLANGE 1

Application

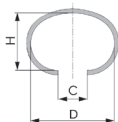
Marathon Traveller

Chemical deposit plating for compact yarn and for all applications in which longer lifetime is required. The optimum quality for a higher performance.

All Texparts Travellers are available in boxes of 5.000 pcs.

Ring spinning machines

Cotton mills
Worsted mills

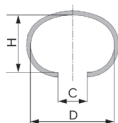


No.	D mm	H mm	C mm
1 - 5	4.70	2.62	1.40
1/0 - 15/0	4.44	2.62	1.40
16/0 - 23/0	4.36	2.55	1.40

Wire section: half-round

No.	Weight per 100 pcs in g	No.	Weight per 100 pcs in g
5	9.50	8/0	2.50
4	9.00	9/0	2.36
3	8.00	10/0	2.24
2	7.10		
1	6.30	11/0	2.00
		12/0	1.80
1/0	5.60	13/0	1.70
2/0	5.00	14/0	1.60
3/0	4.50	15/0	1.50
4/0	4.00		
5/0	3.55	16/0	1.40
		17/0	1.32
6/0	3.15	18/0	1.25
7/0	2.80	19/0	1.12
		20/0	1.00
		22/0	0.90

**C SERIE TRAVELLERS
COTTON
CCT 1 HF / FOR FLANGE 1**



Wire section: half-round

No.	D mm	H mm	C mm
1 - 5	4.00	2.59	1.60
1/0 - 15/0	4.00	2.59	1.60
16/0 - 23/0	4.00	2.59	1.60

No.	Weight per 100 pcs in g
5	9.50
4	9.00
3	8.00
2	7.10
1	6.30
1/0	5.60
2/0	5.00
3/0	4.50
4/0	4.00
5/0	3.55
6/0	3.15
7/0	2.80

No.	Weight per 100 pcs in g
8/0	2.50
9/0	2.36
10/0	2.24
11/0	2.00
12/0	1.80
13/0	1.70
14/0	1.60
15/0	1.50
16/0	1.40
17/0	1.32
18/0	1.25
19/0	1.12
20/0	1.00
22/0	0.90

Application

Marathon Traveller

Chemical deposit plating for compact yarn and for all applications in which longer lifetime is required. The optimum quality for a higher performance.

All Texparts Travellers are available in boxes of 5.000 pcs.

Ring spinning machines

**Cotton mills
Worsted mills**



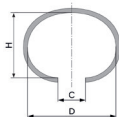
C SERIE TRAVELLERS COTTON AND POLYESTER CP 2 HF / FOR FLANGE 2

Application

Marathon Traveller

Chemical deposit plating for compact yarn and for all applications in which longer lifetime is required. The optimum quality for a higher performance.

All Texparts Travellers are available in boxes of 5.000 pcs.



No.	D mm	H mm	C mm
0.5 - 15	5.46	4.05	1.65
1/0 - 5/0	5.21	3.64	1.65
6/0 - 10/0	5.08	3.55	1.61

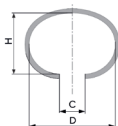
Wire section: half-round

No.	Weight per 100 pcs in g	No.	Weight per 100 pcs in g
15	26.50	3	8.00
14	25.00	2	7.10
13	22.40	1	6.30
12	20.00		
11	18.00	1/0	5.60
10	16.00	2/0	5.00
9	14.00	3/0	4.50
8	12.50	4/0	4.00
7	11.20	5/0	3.55
6	10.00	6/0	3.15
5	9.50	7/0	2.80
4	9.00	8/0	2.50
		9/0	2.36
		10/0	2.24

Ring spinning machines

Cotton mills
Worsted mills

**C SERIE TRAVELLERS
COTTON
CC 1/2 HF / FOR FLANGE 1/2**



Wire section: half-round

No.	D mm	H mm	C mm
2 - 2.5/0	3.84	2.72	1.44
31/0 - 15/0	3.70	2.65	1.10
16/0 - 30/0	3.57	2.56	1.00

No.	Weight per 100 pcs in g
2	7.10
1	6.30
1/0	5.60
2/0	5.00
3/0	4.50
4/0	4.00
5/0	3.55
6/0	3.15
7/0	2.80
8/0	2.50
9/0	2.36
10/0	2.24

No.	Weight per 100 pcs in g
11/0	2.00
12/0	1.80
13/0	1.70
14/0	1.60
15/0	1.50
16/0	1.40
17/0	1.32
18/0	1.25
19/0	1.12
20/0	1.00
22/0	0.90
24/0	0.80
26/0	0.71
28/0	0.69

Application

Marathon Traveller

Chemical deposit plating for compact yarn and for all applications in which longer lifetime is required. The optimum quality for a higher performance.

All Texparts Travellers are available in boxes of 5.000 pcs.

Ring spinning machines

**Cotton mills
Worsted mills**



TEXPARTS SPINNING RINGS TRAVELLER SPEED

Traveller speed (m/s)*

Ring diameter (in mm)

54	25	27	28	30	31	33	34	35	37	38	40	41	42	44	45	47	48	49
51	24	25	27	28	29	31	32	33	35	36	37	39	40	41	43	44	45	47
48	23	24	25	26	28	29	30	31	33	34	35	36	38	39	40	41	43	44
47	22	23	25	26	27	28	30	31	32	33	34	36	37	38	39	41	42	43
45	21	22	24	25	26	27	28	29	31	32	33	34	35	37	38	39	40	
44	21	22	23	24	25	26	28	29	30	31	32	33	35	36	37	38	39	40
42		21	22	23	24	25	26	27	29	30	31	32	33	34	35	36	37	38
41		20	21	23	24	25	26	27	28	29	30	31	32	33	34	35	36	38
40			21	22	23	24	25	26	27	28	29	30	31	32	34	35	36	37
38				21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
36							23	24	25	25	26	27	28	29	30	31	32	33
35							22	23	24	25	26	27	27	28	29	30	31	32
34							21	22	23	24	25	26	27	28	28	29	30	31
32								21	22	23	23	24	25	26	27	28	28	29

9

10

11

12

13

14

15

16

17

Flange 2
Coarse Count
Ne 6-20

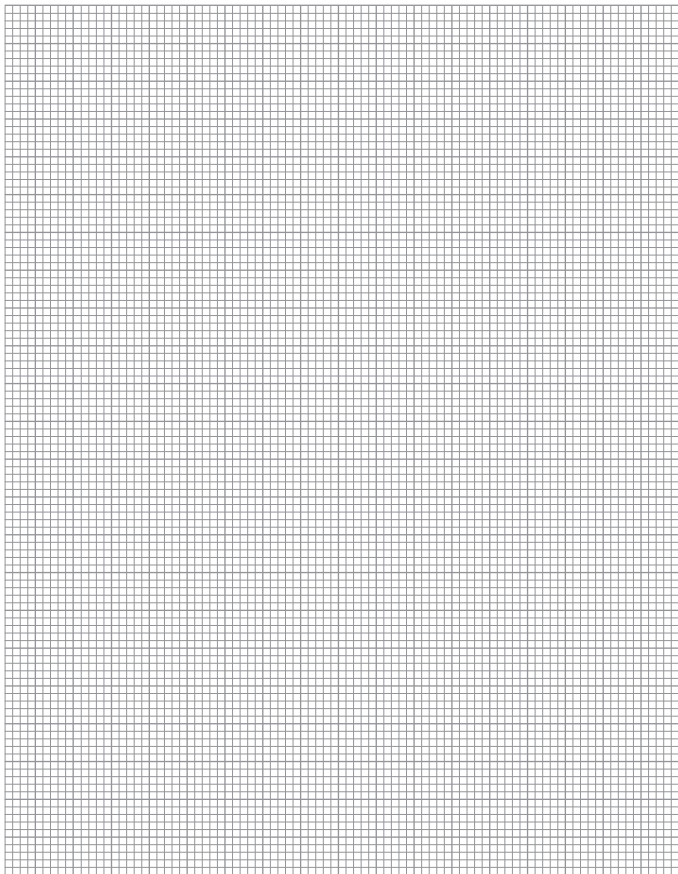
Flange 1
Medium Count
Ne 20-60

Flange 1/2
Fine Count
Ne 60-140



48	49															
45	46	48														
44	46	47	48	49												
41	43	44	45	46	47	48										
40	41	42	43	44	45	46	47	48								
39	40	41	42	43	44	45	46	47								
38	39	40	41	42	43	44	45	46	47	48						
36	37	38	39	40	41	42	43	44	45	46	47	48				
34	35	36	37	38	39	40	41	41	42	43	44	45	46	47	48	
33	34	35	36	37	38	38	39	40	41	42	43	44	45	46	47	48
32	33	34	35	36	36	37	38	39	40	41	42	43	44	45	45	46
30	31	32	33	34	34	35	36	37	38	39	39	40	41	42	43	44
18	19	20	21	22	23	24	25	26								

NOTES



BEARING UNITS
- FOR RING SPINNING
- FOR ROTOR SPINNING

**Contact Rolls
for Tangential
Belt Drives**

**Tension Pulleys
with Shells**

Bearing Units





CONTACT ROLLS AR 5047

Application

For ring spinning machines and twisting machines with tangential belt drives.
Belt width up to 40 mm max.

For lubrication see chapter 9, page 2-3 and 15.

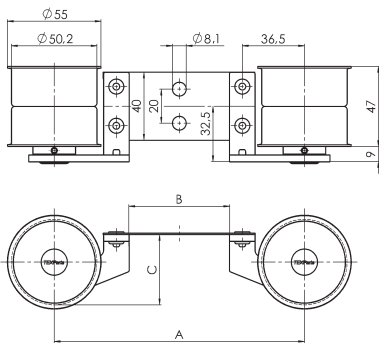
Types Ref.no.	Spindle gauge mm	Dimensions in mm			
		A	B	C	
AR 5047-1253 979	70	138	49.9	41.3	
AR 5047-1253 935	75	147	58.9	41.3	
AR 5047-1253 980	82,5	162	73.9	41.3	
AR 5047-1253 981	90	176	74.0	41.3	

Ring spinning machines

Cotton mills
Worsted mills



	Weight kg	Remarks
	0.548	
	0.552	AR 5047 can be used as replacement for former types AR 28, AR 45, AR 15, AR 13 and AR 100.
	0.556	If AR 5047 is mounted to replace AR 13 distance piece ADZ-0013 365 will be needed.
	0.569	



AR 5047-1253 935



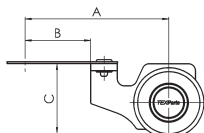
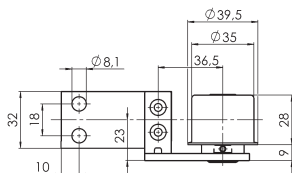
CONTACT ROLLS AR 3528

Application

For ring spinning machines with multi-motor single tangential belt drives.
Belt width up to 20 mm max.

For lubrication see chapter 9, page 2-3 and 15.

Types Ref.no.	Spindle gauge mm	Dimensions in mm			
		A	B	C	
AR 3528-1254 645	70	138	49.8	39.6	
AR 3528-1254 646	75	148	59.8	39.6	
AR 3528-1254 647	82.5	162	73.8	39.6	
AR 3528-1256 633 ¹⁾	82.5	91	36.9	39.6	
AR 3528-1256 546	75	148	59.8	34.6	
AR 3528-1256 547	82.5	167	78.8	34.6	
AR 3528-1264 703 ¹⁾	75	81	29.9	39.6	



AR 3528-1256 633¹⁾

AR 3528-1264 703¹⁾

↑ point of view for
right or left hand

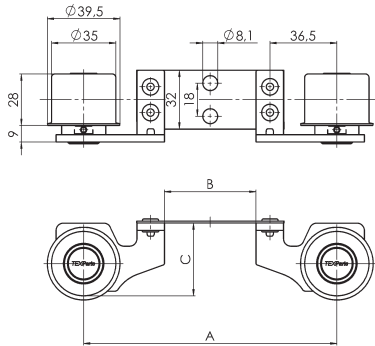
¹⁾righthand half contact roll

Ring spinning machines

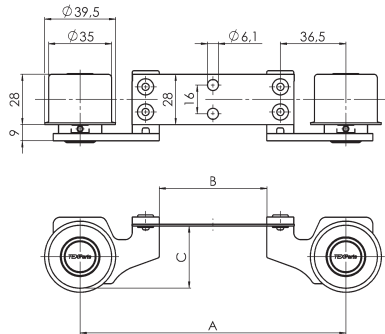
Cotton mills



	Weight kg
	0.350
	0.353
	0.357
	0.176
	0.175
	0.175
	0.192



AR 3528-1254 645



AR 3528-1256 546



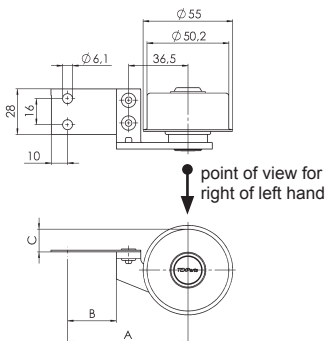
CONTACT ROLLS AR 5024

Application

For ring spinning machines with sectional drive.
Belt width up to 16 mm max.

For lubrication see chapter 9, page 2 and 15.

Types Ref.no.	Spindle gauge mm	Dimensions in mm			
		A	B	C	
AR 5024-1253 978	70	142	53.9	13.9	
AR 5024-1253 990	70 ¹⁾	71	26.8	13.9	
AR 5024-1253 986	70 ²⁾	71	26.8	13.9	
AR 5024-1253 936	75	148	59.9	13.9	
AR 5024-1253 991	75 ¹⁾	74	29.9	13.9	
AR 5024-1253 987	75 ²⁾	74	29.9	13.9	



AR 5024-1253 987 LI²⁾

¹⁾ righthand half contact roll

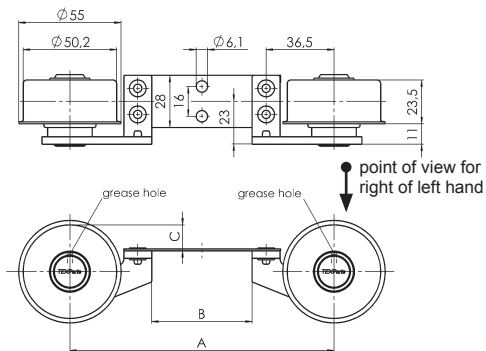
²⁾ lefthand half contact roll

Ring spinning machines

Cotton mills
Worsted mills



	Weight kg	Remarks
	0.371	
	0.187	half right hand
	0.187	half left hand
	0.373	
	0.188	half right hand
	0.188	half left hand



AR 5024-1253 978



BEARING UNITS ZB, ZL

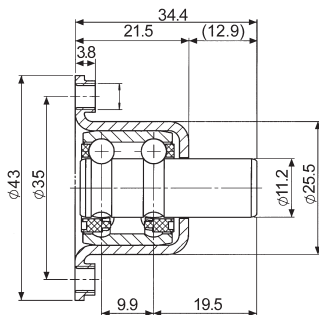
Application

Tension pulley bearing for guiding and tensioning the tape or the belt in belt drives.

As guide or tension pulley bearing in general engineering applications.

For lubrication see chapter 9 page 3.

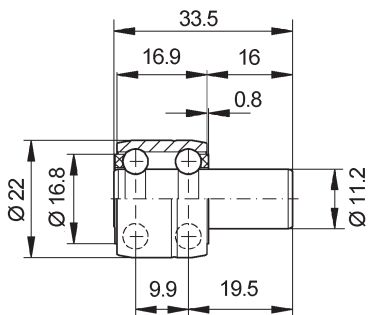
Types Ref.no.	Max. speed n min ⁻¹	Load fig. in N		Weight kg
		C	C0	
ZB 7-0009 023	8000	3380	1220	0.080
ZL 7-0009 941¹⁾	10000	3380	1220	0.043



ZB 7-0009 023

Ring spinning machines
Twisting machines

Textile machinery
General engineering
applications



ZL 7-0009 941¹⁾

¹⁾ Delivery ex works ungreased and without cap.



TENSION PULLEY SR

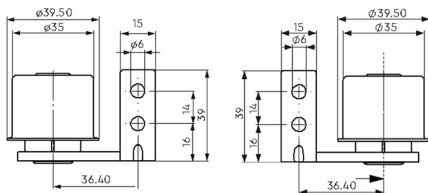
Application

Tension pulleys SR 3528 and SR 5047 for guiding and tensioning the tape or the belt in belt drives.

As guide or tension pulley in general engineering applications.

For lubrication see chapter 9, page 2-3 and 15.

Types Ref.no.	Max. speed n min^{-1}	Load fig. in N		
		C	C_0	
SR 3528 - 1264389	12000	2700	1020	
SR 3528 - 1264390	12000	2700	1020	
SR 5047-1255 698	12000	2700	1020	
SR 5047-1255 699	12000	2700	1020	



Ring spinning machines
Twisting machines

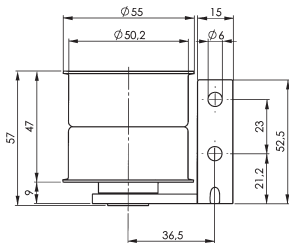
SR 3528-1264 389

SR 3528-1264 390

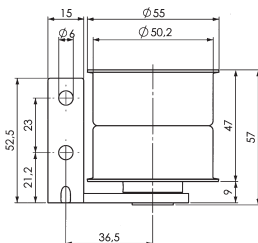
Textile machinery
General engineering
applications



	Weight kg	Max. belt width mm	Description	Remarks
	0.165	25	Tension pulley with angle (lefthand)	Top view of angle see drawing of AR 3528 on chapter 2 page 4
	0.165	25	Tension pulley with angle (righthand)	Top view of angle see drawing of AR 3528 on chapter 2 page 4
	0.265	38	Tension pulley with angle (lefthand)	Top view of angle see drawing of AR 5047 on chapter 2 page 3
	0.265	38	Tension pulley with angle (righthand)	Top view of angle see drawing of AR 5047 on chapter 2 page 3



SR 5047-1255 698



SR 5047-1255 699



TENSION PULLEY SR BEARING UNIT CK

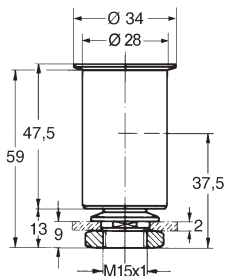
Application

Tension pulley SR 28 for guiding the tangential belt return in two-belt arrangements.

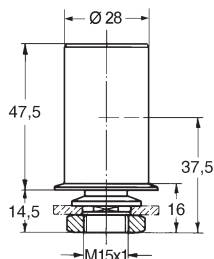
As guide or tension pulley in general engineering applications.

For lubrication see chapter 9, page 2-3 and 15.

Types Ref.no.	Max. speed n min ⁻¹	Load fig. in N		
		C	C ₀	
SR 28-0012 474	15000	3320	1180	
SR 28-0012 473	15000	3320	1180	
CK 11-0007 749	30000	2250	900	



SR 28-0012 474
SMT -0012 478



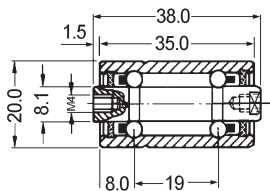
SR 28-0012 473
SMT -0012 478

Ring spinning machines
Twisting machines

Textile machinery
General engineering
applications



	Weight kg	Max. belt width mm	Nut SMT Ref. no.	Remarks
	0.179	38	SMT-0012 478	Nut SMT for tension pulleys SR 28 is not included in standard supply and has to be ordered as separate item.
	0.184	38	SMT-0012 478	
	0.060	30	-	



CK 11-0007 749



BEARING UNIT SR, FR

Application

Bearing units SR for tension pulleys, gear mechanisms and other pulleys.

Guide roller FR as guide roller in belt drives and as bearing unit in gear mechanisms and pulleys.

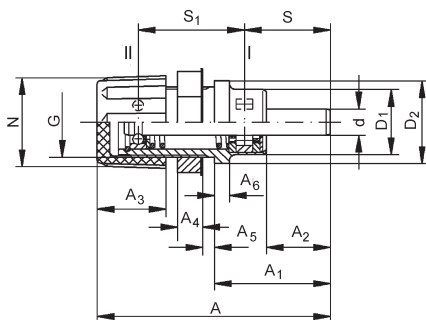
Limits for stud diameter d :
0/-0,01 mm

For lubrication see
chapter 9, page 3 and 15.

¹⁾ black-finished version

**Textile machinery
General engineering
applications**

Types Ref.no.	Dimensions in mm					
	d	D ₁	D ₂	G	N	
SR 23-0953 801	7.8	19.4	24.6	M21x1	26.5	
SR 23-0953 901	7.8	19.4	24.6	M21x1	26.5	
SR 24-0027 755 ¹⁾	7.8	19.4	24.6	M21x1	26.5	
SR 24-0954 051	7.8	19.4	24.6	M21x1	26.5	
SR 35-0954 151	8.8	21.5	29.6	M25x1	30.5	



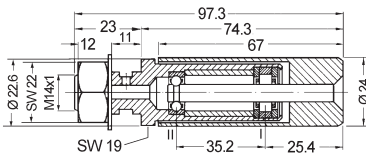
**SR 23-
SR 24-
SR 35-**

Max. speed of all types: 20.000 rpm



												Load rating in N		Weight kg
SW1	SW2	A	A ₁	A ₂	A ₃	A ₄	A ₅	A ₆	S	S ₁	C dyn.	C ₀ stat.		
27	-	84	34.6	19.3	20.5	7.5	9	4.5	25.7	31.6	3800 I 1780 II	2900 I 630 II	0.095	
27	22	84	34.6	19.3	20.5	7.5	9	4.5	25.7	31.6	3800 I 1780 II	2900 I 630 II	0.095	
27	-	95	43.6	20.4	20.5	7.5	9	12.5	26.8	41.6	3800 I 1780 II	2900 I 630 II	0.135	
27	-	95	43.6	20.4	20.5	7.5	9	12.5	26.8	41.6	3800 I 1780 II	2900 I 630 II	0.135	
32	-	114	57.2	22.6	22.0	8.5	11	23.0	29.0	55.8	4400 I 2700 II	3400 I 1000 II	0.248	

Types Ref.no.	Max. speed n min ⁻¹	Load fig. in N		Weight kg
		C dyn.	C ₀ stat.	
FR 232-0964 351	15000	3800 I	2900 I	0.246
		1780 II	630 II	



FR 232-0964 351

I = roller bearing; II = ball bearing



BEARING UNITS ZL AND CR

Application

Bearing unit ZL for winders, toothed wheels and other pulleys.

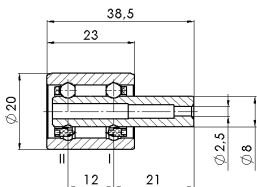
Bearing Unit CR 2 for winders and general engineering applications.

For lubrication see chapter 9, page 3.

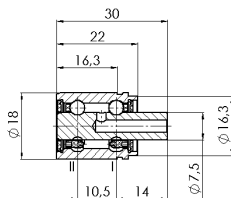
Types Ref.no.	Max. speed n min ⁻¹	Load rating in N	
		C	C ₀
ZL 11-0028 553 ²⁾	20000	2290	950
ZL 17-0016 949 ³⁾	15000	2080 I 2160 II	540 I 710 II
CR 2-0035 905 ¹⁾²⁾	15000	3800 I 1780 II	2900 I 630 II

**Textile machinery
General engineering
applications**

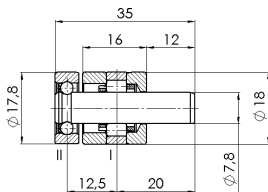
- 1) Delivery ex works ungreased.
2) Delivery ex works without cap.
3) Counter bearing for CR2-0035 905.



ZL 11-0028 553²⁾



ZL 17-0016 949³⁾



CR 2-0035 905¹⁾²⁾



BEARING UNITS DR

Application

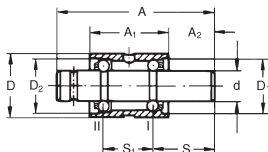
For winders and for general engineering applications.

For lubrication see chapter 9, page 3.

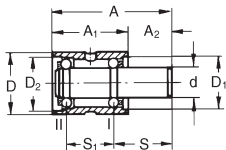
Textile machinery
General engineering
applications

Types Ref.no.	Dimensions in mm			
	d	D	D ₁	D ₂
DR 1620-0958 201	7.5	16	14.0	14.0
DR 1620-0958 251	7.5	16	14.0	14.0
DR 1625-0958 351	7.5	16	13.6	13.5
DR 1922-0958 601	9.0	19	17.0	17.0
DR 1922 -0958 651	9.0	19	17.0	17.0

All types greased ex works, without end cover.



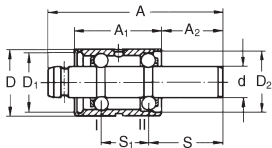
DR 1620-0958 201



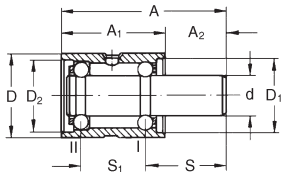
DR 1620-0958 251



	A	A ₁	A ₂	S	S ₁	Max. speed n min ⁻¹	Load rating in N		Weight kg
							C	C ₀	
	40	20	12.0	15.8	12.5	10000	1370 I 1060 II	630 I 140 II	0.026
	28	20	8.0	11.8	12.5	10000	1370 I 1060 II	630 I 140 II	0.024
	50	25	17.0	20.5	15.0	10000	1370 I 1060 II	630 I 140 II	0.035
	34.0	22	12.0	16.3	13.5	10000	2080 I 1630 II	1000 I 232 II	0.035
	42.0	22	20.0	24.3	13.5	10000	2080 I 1630 II	1000 I 232 II	0.041



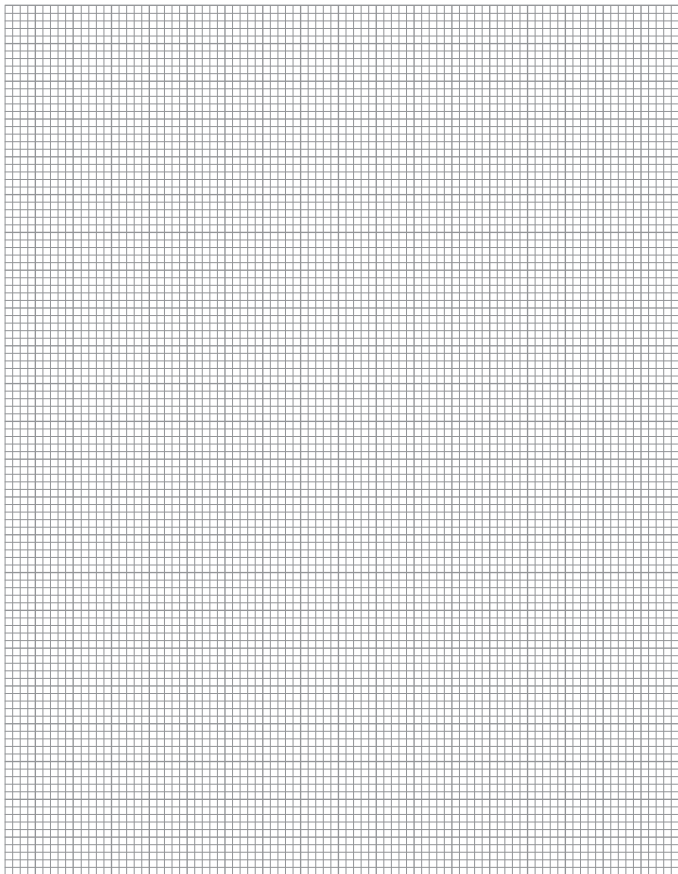
DR 1625-0958 351



DR 1922-0958 601

DR 1922-0958 651

NOTES



**PRODUCTS
FOR SPINNING WITH
RING AND TRAVELLER**

Top Rollers LP

**Cots for Short
and Long Staple
Spinning**

**Top Roller
Lubricating
Equipment and
Accessories**





TOP ROLLERS LP 1002 SERIES

Application

Top roller for use as front and rear top roller.
If requested top rollers can also be supplied as apron top roller with cot - depending on gauge and top apron cradle OH.

Cotton ring spinning machines with weighting arms
PK 3000 Series,
PK 2000 Series,
PK 2100 Series
PK 2600 SE Series.

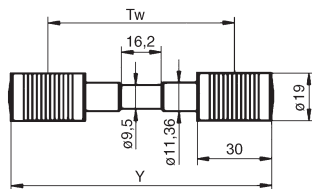
All top rollers in this chapter are without cot. For cot dimensions see chapter 10, page 119.

If desired Texparts will supply top rollers with ready ground Accotex cots. Cot quality can be determined by the customer himself.

Top roller load:
Maximum 25 daN

Types Ref.no.	Gauge Tw in mm	Dimension in mm Y
LP 1002-1249 324	68.4	98.4
LP 1002-1264 212	70	100
LP 1002-1248 379	75	105
LP 1002-1248 382	82.5	112.5
LP 1002-1256 898	90	120
LP 1002-0956 274	100	130

All types: Saddle diameter 9.5 ground
Colour of end cover: blue
End cover: **LPDE -1260 210** (blue)



Ring spinning machines

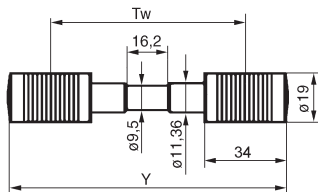
Cotton mills

For lubrication see chapter 8 page 4-5.

TOP ROLLERS LP 1002 SERIES



Types Ref.no.	Gauge Tw in mm	Dimension in mm Y
LP 1002-1264 818	68.4	102.4
LP 1002-1264 819	70	104
LP 1002-1248 601	75	109
LP 1002-1256 896	82.5	116.5
LP 1002-1256 897	90	124



For lubrication see chapter 8 page 4-5.

Application

Top roller for use as apron top roller with cot for apron width 32 mm preferably.

Cotton ring spinning machines with weighting arms PK 3000 Series, PK 2000 Series, PK 2100 Series.

All top rollers in this chapter are without cot. For cot dimensions see chapter 10, page 119.

If desired Texparts will supply top rollers with ready ground Accotex cots. Cot quality can be determined by the customer himself.

Top roller load:
Maximum 25 daN

Ring spinning machines

Cotton mills



TOP ROLLERS LP 1003 SERIES

Application

Top roller with special sleeves for use as apron top roller.

Cotton ring spinning machines with weighting arms
PK 3000 Series,
PK 2000 Series,
PK 2100 Series,
PK 2600 SE Series.

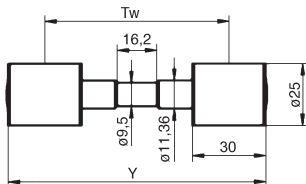
To be used without cots.

For lubrication see
chapter 9, page 4-5.

Top roller load:
25 daN

Types Ref.no.	Gauge Tw in mm	Dimension in mm Y
LP 1003-1256 596	68.4	98.4
LP 1003-1264 218	70	100
LP 1003-1256 597	75	105
LP 1003-1256 598	82.5	112.5
LP 1003-1256 599	90	120

All types: Saddle diameter 9.5 ground
Colour of end cover: blue
End cover: **LPDE -1260 210** (blue)



Ring spinning machines

Cotton mills

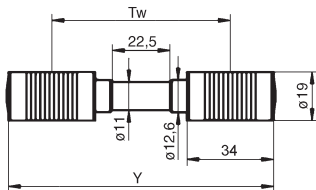
Chapter 3-4

TOP ROLLERS LP 1014 SERIES



Types Ref.no.	Gauge Tw in mm	Dimension in mm Y
LP 1014-1253 740	75	109
LP 1014-1253 741	82.5	116.5
LP 1014-1253 742	90	124
LP 1014-0025 222	100	134

All types: Saddle diameter 11 ground
Colour of end cover: blue
End cover: **LPDE -1260 210** (blue)



Application

Top roller for use as front and rear top roller.

Worsted ring spinning machines with weighting arms of series PK 6000 and PK 1601.

All top rollers in this chapter are without cot. For cot dimensions see chapter 10, page 119.

Top roller load:
Maximum 35 daN

Ring spinning machines

Cotton mills

For lubrication see chapter 8 page 4-5.



TOP ROLLERS LP 1015 SERIES

Application

Top roller for use as front and rear top roller.

Short staple roving frames with weighting arms
PK 5000, PK 1550 and PK 1500.

All top rollers in this chapter are without cot.

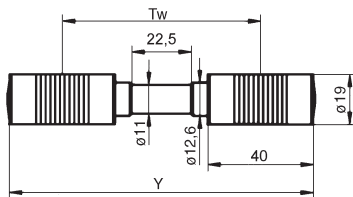
Top roller load:
Maximum 35 daN.

Ring spinning machines
Short staple roving frames

Worsted mills
Cotton mills

Types Ref.no.	Gauge Tw in mm	Dimension in mm Y
LP 1015-1253 744 ¹⁾	82.5	122.5
LP 1015-1253 745 ¹⁾	90	130
LP 1015-0025 227	100	140
LP 1015-0025 228	110	150
LP 1015-0025 229	130	170

All types: Saddle diameter 11 ground
Colour of end cover: blue
End cover: **LPDE -1260 210** (blue)



In worsted ring spinning machines with
PK 6000 weighting arm:

¹⁾For use as apron top roller.

For lubrication see chapter 9 page 4-5.

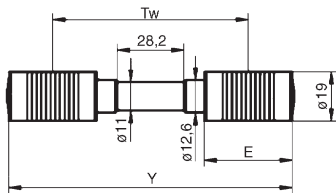
TOP ROLLERS

LP 1016, 1017 SERIES



Types Ref.no.	Gauge Tw in mm	Dimension in mm	
		Y	E
LP 1016-1256 711	75	109	34
LP 1017-1256 712	82.5	122.5	40
LP 1017-1256 713	90	130	40
LP 1017-0013 010	100	140	40
LP 1017-0013 011	110	150	40
LP 1017-0013 012	130	170	40

All types: Saddle diameter 11 ground
 Colour of end cover: blue
 End cover: **LPDE -1260 210** (blue)



Application

Top roller for use as apron top roller.

Short staple roving frames and worsted ring spinning machines with weighting arms series PK 1500 and PK 1601.

All top rollers in this chapter are without cot. For cot dimensions see chapter 10 page 119.

Top roller load:
35 daN

Ring spinning machines
Short staple roving frames

Worsted mills
Cotton mills

For lubrication see chapter 9 page 4-5.



TOP ROLLERS LP 1202 SERIES

Application

Top roller for use as front and rear top roller exclusively for Zinser machines. Short staple ring spinning machines with weighting arms PK 2600 SE, PK 2630 SEH and PK 3000 Series.

If requested, top rollers can also be supplied as apron top roller with cot - depending on gauge and top apron cradle OH.

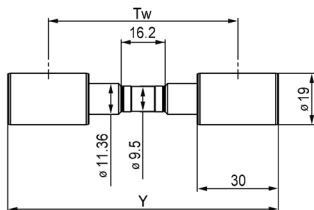
All top rollers in this chapter are without cot.

For cot dimensions see chapter 10, page 119.

If desired Texparts will supply top rollers with ready ground Accotex cots. Cot quality can be determined by the customer himself.

Top roller load:
Maximum 25 daN.

Types Ref.no.	Gauge Tw in mm	Dimension in mm Y
LP 1202-1263 615	70	100
LP 1202-1263 620	75	105



Ring spinning machines

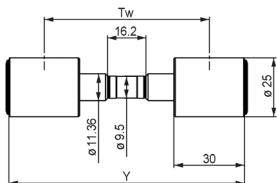
Cotton mills

For lubrication see chapter 9 page 4-5.

TOP ROLLERS LP 1203 SERIES



Types Ref.no.	Gauge Tw in mm	Dimension in mm Y
LP 1203-1263 664	70	100
LP 1203-1263 665	75	105



Application

Top roller with special sleeves for use as apron top roller exclusively for Zinser machines.

Cotton ring spinning machines with weighting arms PK 2600 SE, PK 2630 SEH and PK 3000 Series.

Top roller load:
25 daN

Ring spinning machines

Cotton mills

For lubrication see chapter 9 page 4-5.



TOP ROLLERS LP 302 SERIES WITH SPECIAL SHAPE OF SADDLE

Application

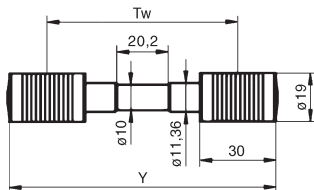
Top roller for use as front and rear top roller for Rieter drafting systems in short staple ring spinning machines.

All top rollers in this chapter are without cot.

Top roller load:
25 daN.

Types Ref.no.	Gauge Tw in mm	Dimension in mm Y
LP 302-0019 135	70	100
LP 302-0015 895	75	105
LP 302-0019 136	80	110
LP 302-0019 137	90	120

All types: Colour of end cover: blue
End cover: **LPDE -1260 210** (blue)



Ring spinning machines

Cotton mills

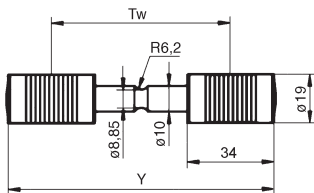
For lubrication see chapter 9 page 4-5.

TOP ROLLERS LP 302 SERIES WITH SPECIAL SHAPE OF SADDLE



Types Ref.no.	Gauge Tw in mm	Dimension in mm Y
LP 302-0010 014	70	104
LP 302-0010 015	75	109
LP 302-0010 011	80	114
LP 302-0010 016	90	124

All types: Colour of end cover: blue
End cover: **LPDE -1260 210** (blue)



Application

Top roller for use as front and rear top roller as well as apron top roller with cot for Rieter drafting systems in short staple ring spinning machines.

All top rollers in this chapter are without cot.

Top roller load:
25 daN.












Ring spinning machines

Cotton mills

For lubrication see chapter 9 page 4-5.



COTS FOR SHORT STAPLE SPINNING

Accotex Product Portfolio				Yarn Count (> = Ne for ring spinning)				
Product	Hardness Shore A	Colour		100 % CO carded	100 % CO combed	CO carded / MMF	CO combed / MMF	100 % MMF
AS-6	-	lavender						
AS-7 ¹⁾	-	green						
AS-8 ²⁾	-	blue						
J-460	60	burgundy			60			
J-463	63	lavender			30		40	50
J-465	65	turquoise		18	18	20	20	30
J-466	67	yellow			20		30	30
121	70	black						
J-470	70	green		20		30		30
118	72	dark grey						
J-490-S	72	reddish brown						
J-476	76	blue		10		18		18
NO-714	80	light green						
J-490	83	grey		5	5	5	5	5
ME-480	80	black						
NO-780P	-	grey						

¹⁾ AccoSmart AS-7 for medium counts

²⁾ AccoSmart AS-8 for all kinds of applications, medium coarse counts

COTS FOR SHORT STAPLE SPINNING



		Short Staple Spinning								Twisting
		Roving				Ring Spinning				
Front top roller cot	Clearer cover	Front top roller	Rear top roller	Apron top roller	Clearer cover	Front top roller	Front top roller for compact applications	Rear top roller	Apron top roller	Sleeve
						■	■			
						■	■			
						■	■	■	■	
						■	■			
						■				
						■	■			
■										
■						■	■			
■		■	■			■		■		■
■										
■		■	■			■		■		■
				■					■	
	■				■					



COTS FOR LONG STAPLE SPINNING AIR JET SPINNING

Accotex Product Portfolio			Yarn Count (> = Ne for ring spinning)		
Product	Hardness Shore A	Colour	100 % WO	WO / MMF	100 % MMF
J-460	60	burgundy	80		
J-463	63	lavender	60	60	
J-465	65	turquoise			
J-466	67	yellow	50	50	
121	70	black			
J-470	70	green	40	40	40
118	72	dark grey			
J-490-S	72	reddish brown			
J-476	76	blue	30	30	30
NO-714	80	light green			
J-490	83	grey	5	5	5
ME-480	80	black			
NO-780 P	-	grey			
NO-780 B	-	grey			

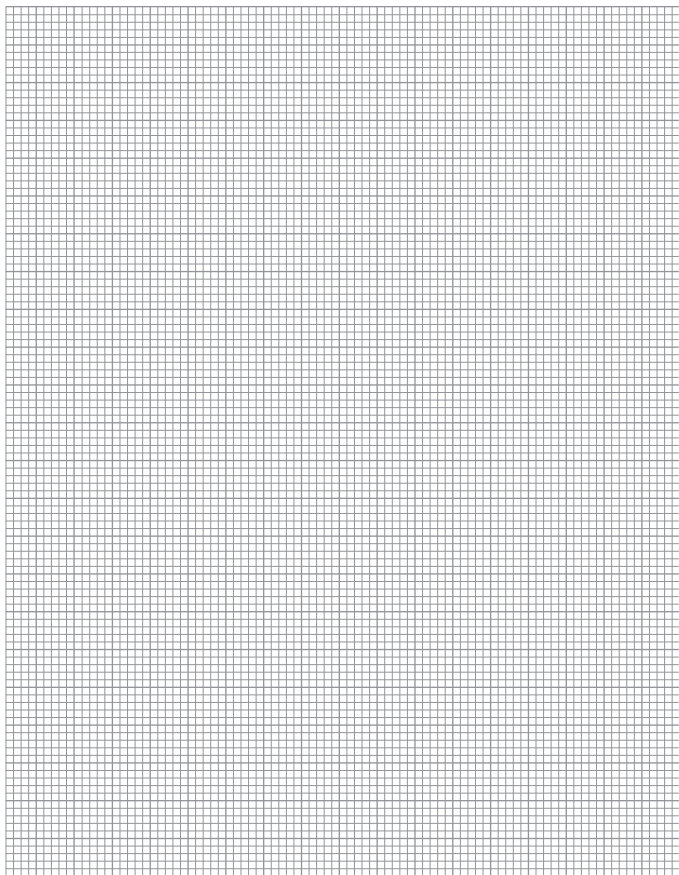
COTS FOR LONG STAPLE SPINNING AIR JET SPINNING



Long Staple Spinning					
Roving	Finisseur		Ring Spinning		
Apron top roller	Front top roller	Rear top roller	Front top roller	Rear top roller	Ballon cot
			■		
			■		
			■		
			■		
			■		
	■	■	■	■	
■					
					■

Air Jet Spinning				
Front roller and nip roller	Apron drive roller	Front roller	Front, back and nip roller	Clearer cover
■				
	■			
		■		
			■	
			■	
				■

NOTES



PRODUCTS
FOR SPINNING WITH
RING AND TRAVELLER

Bottom Rollers

**Bottom Roller
Bearings**



4



BOTTOM ROLLERS

FLUTED BOTTOM ROLLERS

KNURLED BOTTOM ROLLERS

Application

Bottom Rollers
for ring spinning and
roving machines .

Texparts offers a comprehensive range of
fluted and knurled bottom rollers.



The most important quality requirements for our
bottom rollers are:

Fluted/knurled area

- Excellent grip of the apron at knurled area
and yarn on fluted area
- Outstanding narrow tolerances of flutes, with
exact radial run-out
- Extremely wear resistant surface finish
due to a combination of inductive hardening
and hard chrome plating

Well balanced coupling

- Minimized concentricity tolerance
- Optimal length of fit and thread, neck diameter
and bearing position for lowest possible torsional
load

Ring spinning machines
Roving frames

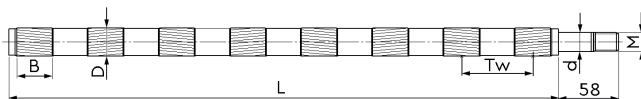
Cotton mills
Worsted mills

BOTTOM ROLLERS ACCESSORIES



Texparts offers a complete package to retrofit bottom rollers, including:

- Fluted/knurled bottom rollers
- Bottom roller bearings UL
- End (tail) pieces
- Special space washer



All parts are manufactured in accordance with provided sample or technical drawing in line with Texparts production standards.

Dimensional details of diameter, length, width of flutes and knurls, with/without recess between flutes, and No. of spindles per roller according to customers' request.

Please ask for Texparts questionnaire for complete (machine upgrading) retrofit inquiries.

For further details please refer to Texparts bottom roller brochure.



BOTTOM ROLLER BEARINGS UL LOCATING CAP WITH SIDE LUGS

Application

For bottom rollers of drafting systems of ring spinning machines and roving frames.

For lubrication see chapter 9, page 4 and 15.

Ring spinning machines
Roving frames

Cotton mills
Worsted mills

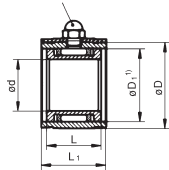
Types Ref.no.	for roller stand width in mm	Dimensions in mm		
		d	D	
UL 28-0000 416	20	16.5	$+0.012$ $+0.002$	28
UL 28-0000 417	22	16.5	$+0.012$ $+0.002$	28
UL 28-0000 418	24	16.5	$+0.012$ $+0.002$	28
UL 28-0010 047	26	16.5	$+0.012$ $+0.002$	28
UL 30-0026 220	22	16	0 -0.010	30
UL 30-0021 106	26	17	$+0.012$ $+0.002$	30
UL 30-0018 195	26	18.5	$+0.012$ $+0.002$	30
UL 30-0002 610	22	18.5	$+0.012$ $+0.002$	30
UL 32-0000 421	22	19	$+0.012$ $+0.002$	32
UL 32-0000 422	24	19	$+0.012$ $+0.002$	32
UL 32-0000 423	25	19	$+0.012$ $+0.002$	32
UL 32-0012 499	26	19	$+0.012$ $+0.002$	32
UL 36-0000 424	22	19	$+0.012$ $+0.002$	36
UL 36-0000 425	24	19	$+0.012$ $+0.002$	36
UL 36-0000 426	25	19	$+0.012$ $+0.002$	36
UL 36-0028 421	20	21	$+0.012$ $+0.002$	36
UL 40-0021 786	20	23	0 -0.010	40

¹⁾ D₁ = Flange diameter of inner ring.

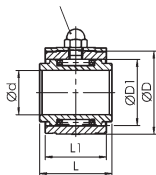


	$D_1^{1)}$	L	L_1	L_3	Load rating daN dyn.C	Weight kg
	23.90	19	23	20.2		
	23.90	19	23	22.2	865	0.060
	23.90	19	23	24.2	865	0.060
	23.90	19	23	26.2	865	0.058
	23.90	26	22	22.2	830	0.084
	25.40	19	22	26.2	830	0.072
	25.40	19	22	26.2	830	0.065
	25.40	19	22	22.2	830	0.065
	26.90	20	24	22.2	1020	0.081
	26.90	20	24	24.2	1020	0.081
	26.90	20	24	25.2	1020	0.081
	26.90	20	24	26.2	1020	0.081
	29.90	22	26	22.2	1180	0.125
	29.90	22	26	24.2	1180	0.125
	29.90	22	26	25.2	1180	0.125
	29.90	22	26	20.2	1180	0.112
	33.90	23.5	27	20.2	1430	0.148

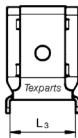
Standard lubricating nipple



Standard lubricating nipple



UL 30-0026 220



Locating cap



BOTTOM ROLLER BEARINGS UL WITH LOCATING CAP WITH CENTRAL NOSE

Application

For bottom rollers of drafting systems of ring spinning machines and roving frames.

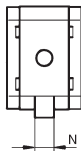
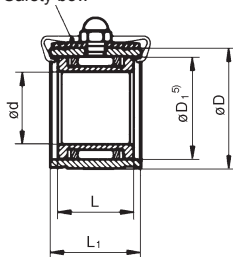
For lubrication see chapter 9, page 4 and 15.

Ring spinning machines
Roving frames

Cotton mills
Worsted mills

Types Ref.no.	Dimensions in mm			
	d	D	K	
UL 28-0003 590	16.5 $+0.012$ $+0.002$	28	–	
UL 30-0007 871 ¹⁾	18.5 0 -0.010	30	–	
UL 30-0003 665 ¹⁾	18.5 $+0.012$ $+0.002$	30	–	
UL 30-0028 276 ²⁾	18.5 $+0.012$ $+0.002$	30	–	
UL 32-0013 400	19 $+0.012$ $+0.002$	32	–	
UL 32-0015 143 ³⁾	19 0 -0.010	32	–	
UL 32-0016 548	21 0 -0.010	32	–	
UL 32-0019 169	18.5 0 -0.010	32	–	
UL 32-0023 114 ⁴⁾	16.295 -0.015 -0.026	32	32.5	
UL 36-0014 782	18.5 0 -0.010	36	–	
UL 36-0016 442	21 $+0.012$ $+0.002$	36	–	
UL 40-0025 408 ⁴⁾	22.984 $+0.010$ 0	40	40.5	

Safety bow ³⁾



Locating cap



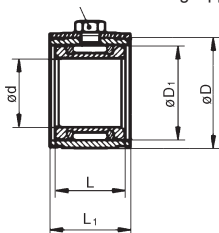
	$D_1^{5)}$	L	L_1	N	Load rating daN dyn. C	Weight kg
	23.90	19	23	5.9	865	0.059
	25.40	19	22	5.9	830	0.065
	25.40	19	22	5.9	830	0.065
	25.40	19	22	5.9	830	0.064
	26.90	20	24	5.9	1020	0.079
	26.90	20	24	5.9	1020	0.079
	27.85	19	23	5.9	935	0.068
	27.85	19	22	5.9	935	0.100
	26.90	17	20	5.9	850	0.100
	29.90	19	22	5.9	1180	0.107
	29.90	22	26	5.9	1180	0.125
	32.85	21	24	5.9	1275	0.135

Remarks

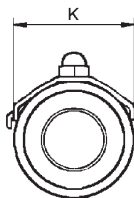
- 1) Different tolerances of bore diameter.
- 2) Funnel lubricating nipple.
- 3) Ex works without lubricant. With safety bow.
- 4) Special locating cap.
- 5) D_1 = flange diameter of inner ring.

Bore tolerance $\begin{matrix} 0 \\ \text{for pressfit } d-0.01 \end{matrix}$
 Bore tolerance $\begin{matrix} \text{for slide fit } d+0.01 \\ 0 \end{matrix}$

Funnel lubricating nipple



UL 30 - 0028 276²⁾



UL 32 -0023 114⁴⁾

UL 40 -0025 408⁴⁾



BOTTOM ROLLER BEARINGS UL WITH LOCATING CLIP UCL WITH SIDE LUGS

Application

For bottom rollers of drafting systems of ring spinning machines and roving frames.

For the application of bottom roller bearings with side lugs, the standard types with locating cap (see chapter 4) should be used if bearing dimensions are identical.

For lubrication see chapter 9, page 4 and 15.

Ring spinning machines
Roving frames

Cotton mills
Worsted mills

Chapter 4-8

Types Ref.no.	Dimensions in mm			
	d	D	D ₁ ¹⁾	
UL 28-0959 274	14.2 ^{+0.002} -0.008	28	23.90	
UL 28-0959 263	16.5 ^{+0.012} +0.002	28	23.90	
UL 32-0959 261	16.2 ⁰ -0.008	32	26.90	
UL 32-0959 262	19 ^{+0.012} +0.002	32	26.90	
UL 36-0959 265	19 ^{+0.012} +0.002	36	29.90	
UL 45-0959 268	25 ^{+0.012} +0.002	45	36.90	

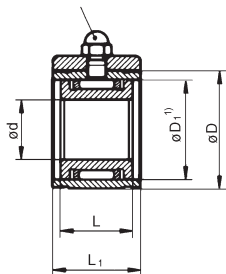
Locating clip Ref.no.	for roller stand width in mm	L ₃
UCL-0964 125	20	20.2
UCL-0964 126	22	22.2
UCL-0964 129	24	24.2
UCL-0964 127	25	25.2
UCL-0964 136	26	26.2
UCL-0964 128	30	30.2

¹⁾ D₁ = flange diameter of inner ring.

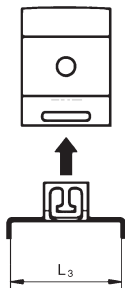


				Load rating daN dyn. C	Weight kg	Remarks
L	L ₁	K				
16.6	23	-		720	0.073	One locating clip to be used with each bottom roller bearing. Size L ₃ of clip depends on width of roller stand. If bottom rollers are ordered, the locating clip according to the required stand width must be ordered separately.
19	23	-		865	0.063	
19.7	24	-		1020	0.153	
20	24	-		1020	0.095	
22	26	-		1180	0.104	
25	29	-		1760	0.239	

Standard lubricating nipple



Diecasting cap



Locating clip UCL



BOTTOM ROLLER BEARINGS UL SPECIAL DESIGNS

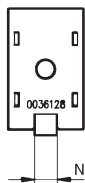
Application

UL 32-0036 128 for Marzoli ring spinning machines and roving frames.

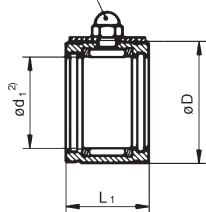
UL 28-1259 366 for Murata air jet spinning machines.

Types Ref.no.	Dimensions in mm				
	d	D	D ₁ ¹⁾	d ₁ ²⁾	
UL 32-0036 128	-	32	-	24	
UL 28-1259 366	16.5 ^{+0.012} _{+0.002}	28	23.9	-	

Locating cap



Standard lubricating nipple



UL 32-0036 128

For lubrication see
chapter 9, page 4 and 15.

Ring spinning machines
Roving frames
Air jet spinning machines

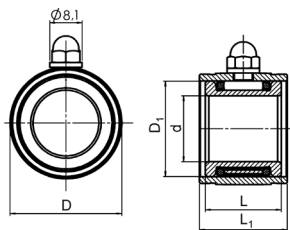
Cotton mills

¹⁾D₁ = collar diameter of inner ring.

²⁾d₁ = Inside diameter of the needle complement.

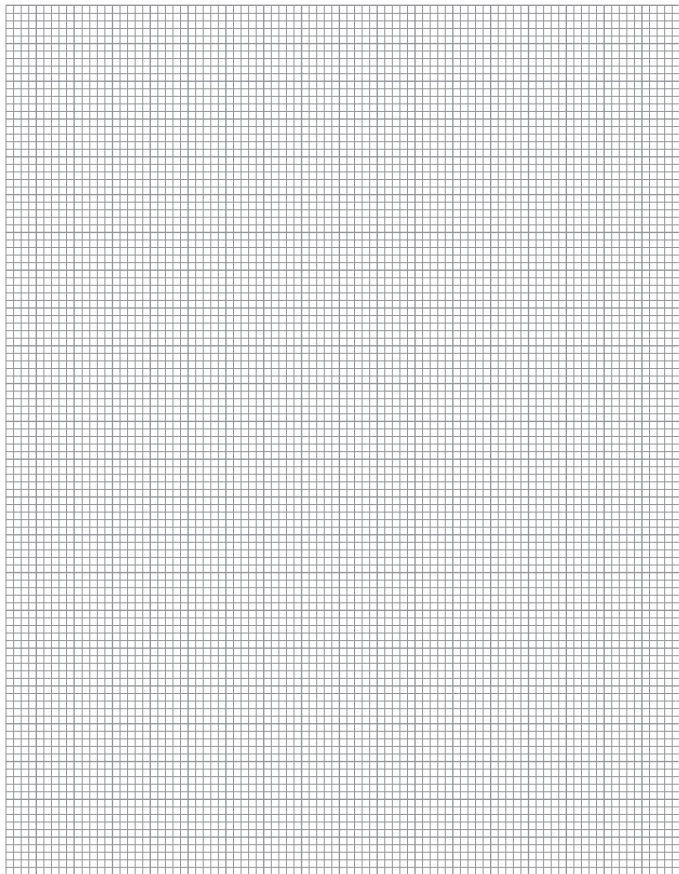


			Load rating daN dyn. C	Weight kg
L	L ₁	N		
-	22	5.9	935	0.053
19	22	-	935	0.050



UL 28-1259 366

NOTES



**PRODUCTS
FOR RING SPINNING**

**Weighting Arms
with Equipment
and Drafting
System Data**

Distance Clips

Adjustment Tools

Spare Parts





WEIGHTING ARMS PK 2630 SE, PK 2635 SE

Application

Short staple ring spinning machines with 3-roller-double apron drafting system PK 2630 SE-6011 651.

With top apron cradle OH 2122/OH 2022/OH 2132 for cotton fibres, synthetics and corresponding blends up to 45 mm. With cradle OH 2142 for long cotton fibres and synthetics up to 54 mm and corresponding blends. With cradle OH 122 for synthetics up to approx. 60 mm fibre length.

PK 2635 SE-6013 408 weighting arms are mainly used for spinning of longer staple fibres.

Compact systems of well known suppliers found in the market can be retro-fitted to all weighting arms of PK 2600 series.

See also chapter 10, page 37.

Ring spinning machines

Cotton mills

Chapter 5-2

Load position	Front / Rear element		Middle element	
	Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾

PK 2630 SE-6011 651

1	10	30	8	25
2	12.5		10.5	
3	15.0		13.0	
4	17.5		15.5	
5	20		18	

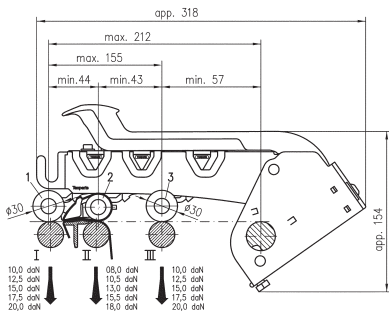
PK 2635 SE-6013 408

1	10	35	8	25
2	12.5		10.5	
3	15.0		13.0	
4	17.5		15.5	
5	20		18	

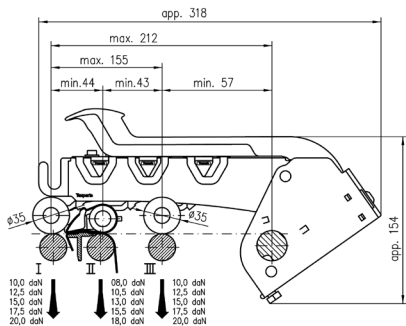
Front clearer roller Ref.No.

Gauge Tw in mm	Front clearer roller
70	6010 654
75	6010 609
82.5	1247 967

¹⁾ Diameter values refer to top rollers with new cots.



PK 2630 SE-6011 651



PK 2635-6013 408

Dimensions are shown in mm.



WEIGHTING ARMS

PK 2630 SE, PK 2635 SE

EQUIPMENT AND DRAFTING SYSTEM DATA
SHORT STAPLE RING SPINNING MACHINES

Equipment for weighting arms PK 2630 SE-6011 651 and PK 2635 SE-6013 408
(Equipment is not included in scope of delivery of weighting arm)

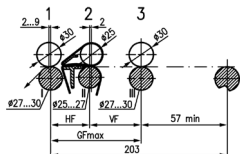
Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref.No.	Position in weigh- ing arm ²⁾
Front and rear top roller:				
70			LP 1002-1264 212	1/3
75			LP 1002-1248 379	1/3
Top apron cradle, apron and apron top roller (LP 1003 with special sleeve as standard):				
70	OH 2122-6020 689 (OH short)	PR 28	LP 1003-1264 218 LP 1002-1264 212	2
	OH 2132-6023 011 (OH short-medium)	PR 2839		
	OH 2142-6020 803 (OH medium)	PR 2813		
75	OH 2122-6018 321 (OH short)	PR 28	LP 1003-1256 597 LP 1002-1248 601	2
	OH 2132-6023 589 (OH short-medium)	PR 2839		
	OH 2142-6022 727 (OH medium)	PR 2813		
Top apron cradle, apron and apron top roller (LP 1002 w. cot or LP 1003 w. special sleeve):				
68.4	OH 122-0963 495 (OH long)	PR 028	LP 1003-1256 596 LP 1002-1249 324	2
75	OH 122-0963 500 (OH long)	PR 028	LP 1002-1248 601 LP 1003-1256 597	2

¹⁾ Ref. Nos. mentioned are for top rollers without cots. Cot quality according to customers' request.

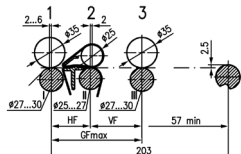
²⁾ Position in weighting arm (see fig. on next page): 1 = Front 1 | 2 = Middle 2 | 3 = Rear 3



Drafting system setting



PK 2630 SE-6011 651



PK 2635 SE-6013 408

Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm				Max. fibre length mm
		HF	VF min.	VF common ³⁾	GF mm max.	
PK 2630 SE-6011 651	OH 2022/OH 2122/ OH 2132	44	34	³⁾	143	45
	OH 2142	53	34	³⁾	143	54
	OH 122	68	34	³⁾	143	60
PK 2635 SE-6013 408	OH 2022/OH 2122/ OH 2132	46	34	³⁾	143	45
	OH 2142	55	34	³⁾	143	54
	OH 122	70	34	³⁾	143	60

Distance clips OLC for top apron cradles⁴⁾

OH 2022	OLC-0964 118 yellow	OLC-0017 705 lilac	OLC-0964 119 white
OH 2122	OLC-0017 705 lilac	OLC-0964 119 white	OLC-0017 627 grey
OH 2132	OLC-0017 705 lilac	OLC-0964 119 white	OLC-6006 661 light green
OH 2142	OLC-0964 117 red	OLC-0964 118 yellow	OLC-0964 119 white
OH 122	OLC-0964 118 yellow	OLC-0964 119 white	OLC-0017 627 grey

	PK 2630 SE		PK 2635 SE	
Bottom roller diameter in mm: ⁵⁾	Front I	25 / 27	Front I	27 / 30
	Middle II	25 / 27	Middle II	25 / 27
	Rear III	25 / 27	Rear III	27 / 30

³⁾ The distance VF depends on the fibre to be spun, length of fibre and roving twist.

⁴⁾ Basic supply of distance clip. Clips are not included in OH supply.

⁵⁾ Diameters shown for bottom rollers are mere reference values



WEIGHTING ARMS PK 2655 SE, PK 2665 SE

Application

Short staple ring spinning machines with 3-roller-double apron drafting system PK 2655 SE-6013 413.

With top apron cradle OH 2122/OH 2022 for cotton fibres, synthetics and corresponding blends up to 45 mm.

With cradle OH 2142 for long cotton fibres and synthetics up to 54 mm and corresponding blends. With cradle OH 122 for synthetics up to approx. 60 mm fibre length.

PK 2665 SE-6013 417 weighting arms are mainly used for spinning of longer staple fibres.

See as well chapter 10, page 37.

Ring spinning machines

Cotton mills

Chapter 5-6

Load position	Front element		Middle element	
	Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾

PK 2655 SE-6013 413

1	10	30	8	25
2	12.5		10.5	
3	15		13	
4	17.5		15.5	
5	20		18	

PK 2665 SE-6013 417

1	10	35	8	25
2	12.5		10.5	
3	15		13	
4	17.5		15.5	
5	20		18	

Front clearer roller

Ref.No.

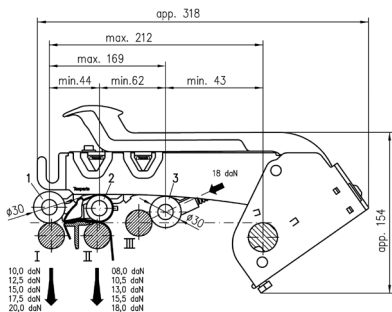
Gauge Tw in mm	Front clearer roller
70	6010 654
75	6010 609
82.5	1247 967

¹⁾ Diameter values refer to top rollers covered with new cots.

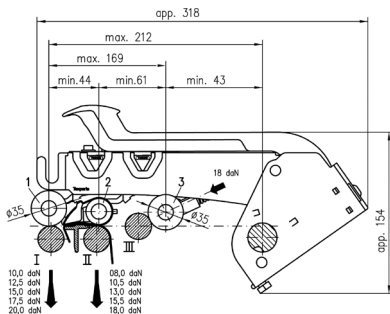
²⁾ Only one load step provided.



Rear element	
Load in daN	Top roller Ø in mm ¹⁾
18 ²⁾	30
18 ²⁾	35



PK 2655 SE-6013 413



PK 2665-6013 417

Dimensions are shown in mm.



WEIGHTING ARMS

PK 2655 SE, PK 2665 SE

EQUIPMENT AND DRAFTING SYSTEM DATA
SHORT STAPLE RING SPINNING MACHINES

Equipment for weighting arms PK 2655 SE-6013 413 and PK 2665 SE-6013 417
(Equipment is not included in scope of delivery of weighting arm)

Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref.No.	Position in weigh- ing arm ²⁾
----------------------	---------------------	-------	--	---

Front and rear top roller:

70			LP 1002-1264 212	1/3
75			LP 1002-1248 379	1/3

Top apron cradle, apron and apron top roller (LP 1003 with special sleeve as standard):

70	OH 2122-6020 689 (OH short)	PR 28	LP 1003-1264 218 LP 1002-1264 212	2
	OH 2132-6023 011 (OH short-medium)	PR 2839		
	OH 2142-6020 803 (OH medium)	PR 2813		
75	OH 2122-6018 321 (OH short)	PR 28	LP 1003-1256 597 LP 1002-1248 379	2
	OH 2132-6023 589 (OH short-medium)	PR 2839		
	OH 2142-6022 727 (OH medium)	PR 2813		

Top apron cradle, apron and apron top roller (LP 1002 w. cot or LP 1003 w. special sleeve):

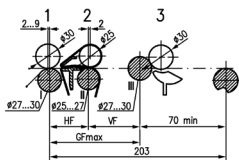
68.4	OH 122-0963 495 (OH long)	PR 028	LP 1003-1256 596 LP 1002-1249 324	2
75	OH 122-0963 500 (OH long)	PR 028	LP 1002-1248 379 LP 1003-1256 597	2

¹⁾ Ref. Nos. mentioned are for top rollers without cots. Cot quality according to customers' request.

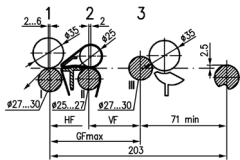
²⁾ Position in weighting arm (see fig. on next page): 1 = Front 1 | 2 = Middle 2 | 3 = Rear 3



Drafting system setting



PK 2655 SE-6013 413



PK 2665 SE-6013 417

Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm				Max. fibre length mm
		HF	VF min.	VF common ³⁾	GF mm max.	
PK 2655 SE-6013 413	OH 2022/OH 2122/ OH 2132	44	36	3)	132	45
	OH 2142	53	36	3)	132	54
	OH 122	68	36	3)	132	60
PK 2665 SE-6013 417	OH 2022/OH 2122/ OH 2132	46	36	3)	132	45
	OH 2142	55	36	3)	132	54
	OH 122	70	36	3)	132	60

Distance clips OLC for top apron cradles⁴⁾

OH 2022	OLC-0964 118 yellow	OLC-0017 705 lilac	OLC-0964 119 white
OH 2122	OLC-0017 705 lilac	OLC-0964 119 white	OLC-0017 627 grey
OH 2132	OLC-0017 705 lilac	OLC-0964 119 white	OLC-6006 661 light green
OH 2142	OLC-0964 117 red	OLC-0964 118 yellow	OLC-0964 119 white
OH 122	OLC-0964 118 yellow	OLC-0964 119 white	OLC-0017 627 grey

	PK 2655 SE	PK 2665 SE
Bottom roller diameter in mm: ⁵⁾	Front I	25 / 27
	Middle II	25 / 27
	Rear III	25 / 27

³⁾ The distance VF depends on the fibre to be spun, length of fibre and roving twist.

⁴⁾ Basic supply of distance clip. Clips are not included in OH supply.

⁵⁾ Diameters shown for bottom rollers are mere reference values



WEIGHTING ARMS PK 2630 SEH

Application

Short staple ring spinning machines with 3-roller-double apron drafting system with hexagonal support rod.

With top apron cradle OH 2122 / OH 2132 for cotton fibres, synthetics and corresponding blends up to 45 mm.

With cradle OH 2142 for long cotton fibres and synthetics up to 54 mm.

Compact systems of well known suppliers found in the market can be retro-fitted to all weighting arms of PK 2600 series.

See as well chapter 10, page 49.

Ring spinning machines

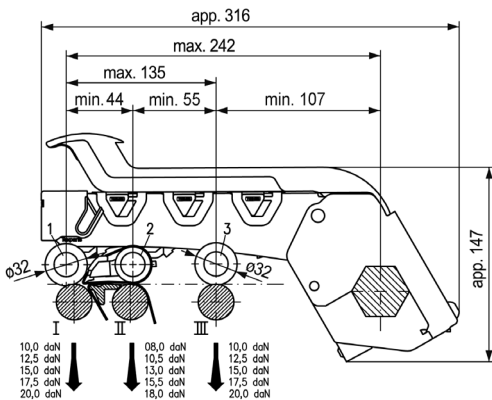
Cotton mills

Chapter 5-10

Load position	Front / Rear element		Middle element	
	Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾
PK 2630 SEH-6022 400				
1	10	32	8	25
2	12.5		10.5	
3	15		13.0	
4	17.5		15.5	
5	20		18	

Front clearer roller Ref.No.	
Gauge Tw in mm	Front clearer roller
70	6010 654
75	6010 609

¹⁾ Diameter values refer to top rollers covered with new cots.



PK 2630 SEH-6022 400

Dimensions are shown in mm.



WEIGHTING ARMS PK 2630 SEH

EQUIPMENT AND DRAFTING SYSTEM DATA
SHORT STAPLE RING SPINNING MACHINES

Equipment for weighting arms PK 2630 SEH

(Equipment is not included in scope of delivery of weighting arm)

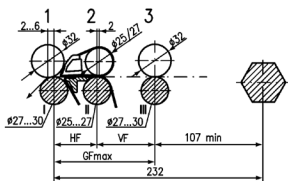
Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref.No.	Position in weigh- ing arm ²⁾
Front and rear top roller:				
70			LP 1002-1264 212	1/3
75			LP 1002-1248 379	1/3
Top apron cradle, apron and apron top roller (LP 1203 with special sleeve as standard):				
70	OH 2122-6020 689 (OH short)	PR 28	LP 1003-1264 218 LP 1002-1264 212	2
	OH 2132-6023 011 (OH short-medium)	PR 2839		
	OH 2142-6020 803 (OH medium)	PR 2813		
75	OH 2122-6018 321 (OH short)	PR 28	LP 1003-1256 597 LP 1002-1248 379	2
	OH 2132-6023 589 (OH short-medium)	PR 2839		
	OH 2142-6022 727 (OH medium)	PR 2813		

¹⁾ Ref. Nos. mentioned are for top rollers without cots. Cot quality according to customers' request.

²⁾ Position in weighting arm (see fig. on next page): 1 = Front 1 | 2 = Middle 2 | 3 = Rear 3



Drafting system setting



PK 2630 SEH

Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm				Max. fibre length mm
		HF	VF min.	VF common ³⁾	GF mm max.	
PK 2630 SEH	OH 2122	44	36	³⁾	132	45
	OH 2132	44	36	³⁾	132	54
	OH 2142	53	36	³⁾	132	60

Distance clips OLC for top apron cradles⁴⁾

OH 2122	OLC-0017 705 lilac	OLC-0964 119 white	OLC-0017 627 grey
OH 2132	OLC-0017 705 lilac	OLC-0964 119 white	OLC-6006 661 light green
OH 2142	OLC-0964 117 red	OLC-0964 118 yellow	OLC-0964 119 white

PK 2630 SEH		
Bottom roller diameter in mm: ⁵⁾	Front I	27 / 30
	Middle II	25 / 27
	Rear III	27 / 30

- ³⁾ The distance VF depends on the fibre to be spun, length of fibre and roving twist.
⁴⁾ Basic supply of distance clip. Clips are not included in OH supply.
⁵⁾ Diameters shown for bottom rollers are mere reference values



WEIGHTING ARMS PK 2025 PLUS, PK 2035 PLUS

Application

Short staple ring spinning machines with 3-roller-double apron drafting system.

With top apron cradle OH 2022 / OH 62 for cotton fibres, synthetics and corresponding blends up to 45 mm.

With top apron cradle OH 2042 / OH 132 for long cotton fibres and synthetics up to 54 mm.

With cradle OH 122 for synthetics up to 60 mm.

Weighting arm PK 2035 Plus is mainly used for spinning of longer staple fibres.

See as well chapter 10, page 57.

Ring spinning machines

Cotton mills

Load position	Front element		Middle element		
	Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾	
PK 2025 Plus-6020 720					
PK 2025 Plus-6022 025					
Partial load	9	28	-	-	
1	13		-	-	
2	15		-	-	
3	17		-	-	
4	19		10	25	
5	21		14	25	

PK 2035 Plus-6021 304					
PK 2035 Plus-6022 035					
Partial load	9	35	-	-	
1	13		-	-	
2	15		-	-	
3	17		-	-	
4	19		10	25	
5	21		14	25	

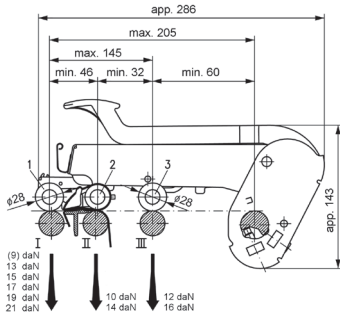
Front clearer roller Ref.No.

Gauge Tw in mm	Front clearer roller
68.4	6010 654
75	6010 609
82.5	1247 967

¹⁾ Diameter values refer to top rollers covered with new cots.

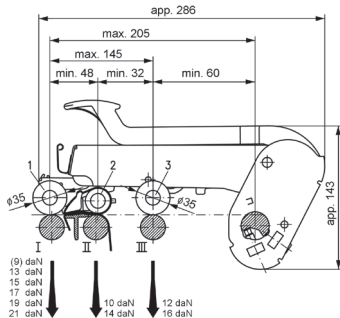


	Rear element	
	Load in daN	Top roller Ø in mm ¹⁾
	-	-
	-	-
	-	-
	12	28
	18	28



PK 2025 Plus-6020 720
PK 2025 Plus-6022 025

	-	-
	-	-
	-	-
	12	35
	18	35



PK 2035 Plus-6021 304
PK 2035 Plus-6022 035

Dimensions are shown in mm.



WEIGHTING ARMS

PK 2025 PLUS, PK 2035 PLUS

EQUIPMENT AND DRAFTING SYSTEM DATA
SHORT STAPLE RING SPINNING MACHINES

Equipment for weighting arms PK 2000 Plus Series

(Equipment is not included in scope of delivery of weighting arm)

Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref.No.	Position in weigh- ing arm ²⁾
----------------------	---------------------	-------	--	---

Front and rear top roller:

68.4			LP 1002-1249 324	1/3
75			LP 1002-1248 379	1/3
82.5			LP 1002-1248 382	1/3
90			LP 1002-1256 898	1/3

Top apron cradle, apron and apron top roller

(LP 1203 with special sleeve as standard or LP 1002 with cot):

68.4	OH 2022-1247 888 (OH short)	PR 28	LP 1003-1256 596 LP 1002-1249 324	2
	OH 2042-1250 133 (OH short-medium)	PR 2813		
	OH 132-0936 700 ³⁾ (OH medium)			
	OH 122-0963 495 (OH long)	PR 028		
75	OH 2022-1247 887 (OH short)	PR 28	LP 1003-1256 597	2
	OH 2042-1250 134 (OH short-medium)	PR 2813	LP 1002-1248 379	
82.5	OH 2022-1247 889 (OH short)	PR 28	LP 1003-1256 598 LP 1002-1248 382	2

Top apron cradle, apron and apron top roller

(LP 1002 with special sleeve as standard or LP 1003 with cot):

75	OH 132-0963 660 ³⁾ (OH medium)	PR 323	LP 1002-1248 379	2
	OH 122-0963 500 (OH long)	PR 023	LP 1003-1256 597	
82.5	OH 132-0963 671 (OH medium)	PR 323	LP 1002-1248 382	2
	OH 122-0963 511 (OH long)	PR 023	LP 1003-1256 598	
90	OH 62-0962 841	PR 32	LP 1002-1256 898	

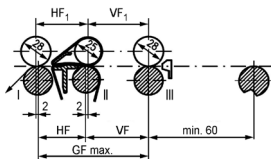
¹⁾ Ref. Nos. mentioned are for top rollers without cots. Cot quality according to customers' request.

²⁾ Position in weighting arm (see fig. on next page): 1 = Front 1 | 2 = Middle 2 | 3 = Rear 3

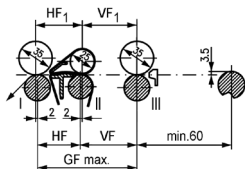
³⁾ Delivery until using-up of stock.



Drafting system setting



PK 2025 Plus



PK 2035 Plus

Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm				Max. fibre length mm
		HF	VF min.	VF common ⁴⁾	GF mm max.	
PK 2025 Plus-6020 720 PK 2025 Plus-6022 025	OH 2022 / OH 62	44	34	⁴⁾	143	45
	OH 2042 / OH 132	53	34	⁴⁾	143	54
	OH 122	68	34	⁴⁾	143	60
PK 2035 Plus-6021 304 PK 2035 Plus-6022 035	OH 2022 / OH 62	46	34	⁴⁾	143	45
	OH 2042 / OH 132	55	34	⁴⁾	143	54
	OH 122	70	34	⁴⁾	143	60

Distance clips OLC for top apron cradles⁵⁾

OH 2022/OH 62	OLC-0964 118 yellow	OLC-0017 705 lilac	OLC-0964 119 white
OH 2042/OH 132	OLC-0964 117 red	OLC-0964 118 yellow	OLC-0964 119 white
OH 122	OLC-0964 118 yellow	OLC-0964 119 white	OLC-0017 627 grey

Bottom roller diameter in mm: ⁶⁾	PK 2025 Plus		PK 2035 Plus	
	Front I	25 / 27	Front I	27 / 30
	Apron II	25 / 27	Middle II	25 / 27
	Rear III	25 / 27	Rear III	27 / 30

⁴⁾ The distance VF depends on the fibre to be spun, length of fibre and roving twist.

⁵⁾ Basic supply of distance clip. Clips are not included in OH supply.

⁶⁾ Diameters shown for bottom rollers are mere reference values



WEIGHTING ARMS PK 5000

Application

3-roller double apron drafting system for roving frames.

With top apron cradle OH 5022 for cotton and synthetic fibres up to approx. 45 mm length.

With cradle OH 5042 for long cotton fibres and synthetics up to 54 mm.

With cradle OH 5245 for synthetics up to approx. 60 mm fibre length.

Application:

PK 5025-1259 471 is mainly used for the spinning of short fibres. PK 5035-1259 473 is mainly used for the spinning of longer fibres. See as well chapter 10, page 75.

Types
Ref.no.

PK 5025-1259 471¹⁾
PK 5035-1259 473¹⁾

Operating
pressure

Load on top roller (daN)
Front 1 Middle 2 Rear 3

from 1,5 bar
↓
up to 4,0 bar

17
↓
36

12
↓
21

16
↓
32

Top roller for

PK 5025 Ø mm²⁾: Ø A=28 Ø A=25 Ø A=28

Top roller for

PK 5035 Ø mm²⁾: Ø A=35 Ø A=25 Ø A=35

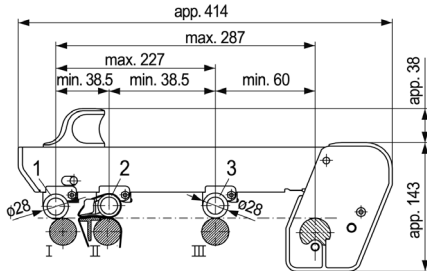
Roving frames

Cotton mills

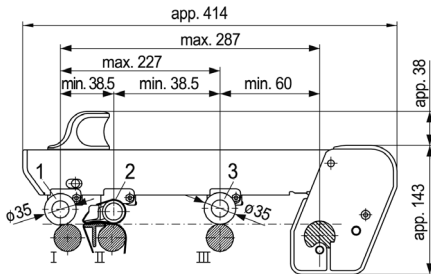
Dimensions are shown in mm.

¹⁾ Pneumatic loading; air pressure required.

²⁾ Dia. values refer to top rollers covered with new cots.



PK 5025-1259 471¹⁾



PK 5035-1259 473¹⁾



WEIGHTING ARMS PK 5000

Application

4-roller double apron drafting system for roving frames.

With top apron cradle OH 5022 for cotton and synthetic fibres up to approx. 45 mm length.

With cradle OH 5042 for long cotton fibres and synthetics up to 54 mm.

With cradle OH 5245 for synthetics up to approx. 60 mm fibre length.

Application:

PK 5025-1259 472 is mainly used for the spinning of short fibres. PK 5035-1259 474 and PK 5035-6010 014 are mainly used for the spinning of longer fibres. See as well chapter 10, page 75.

Roving frames

Cotton mills

Types
Ref.no.

PK 5025-1259 472¹⁾
PK 5035-1259 474¹⁾

Operating pressure

Load on top roller (daN)
Front 1 Middle 2 Middle 3 Rear 4

from 1,5 bar
↓
up to 4,0 bar

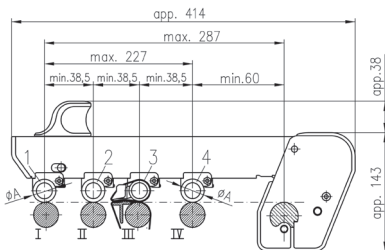
10	15	10	15
↓	↓	↓	↓
20	31	20	31

Top roller for PK 5025
Ø mm²⁾

Ø A=28 Ø A=28 Ø A=25 Ø A=28

Top roller for PK 5035
Ø mm²⁾

Ø A=35 Ø A=35 Ø A=25 Ø A=35



Dimensions are shown in mm.

¹⁾ **Pneumatic loading; air pressure required.**


²⁾ Dia. values refer to top rollers covered with new cots.



Types
Ref.no.

PK 5025-1260 632¹⁾
PK 5035-6010 014¹⁾

Operating pressure

from 1,5 bar

 up to 4,0 bar

Load on top roller (daN)

Front 1 Middle 2 Middle 3 Rear 4

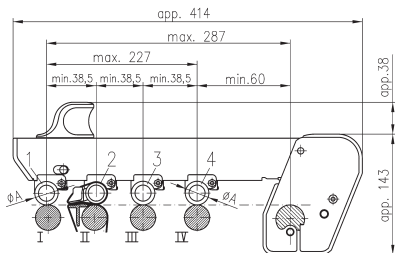
15	10	15	15
			
31	20	31	31

Top roller for PK 5025 Ø mm²⁾:

Ø A=28 Ø A=25 Ø A=28 Ø A=28

Top roller for PK 5035 Ø mm²⁾:

Ø A=35 Ø A=25 Ø A=35 Ø A=35



Dimensions are shown in mm.

- 1) **Pneumatic loading; air pressure required.**
- 2) Dia. values refer to top rollers covered with new cots.



WEIGHTING ARMS PK 5000

EQUIPMENT AND DRAFTING SYSTEM DATA

COTTON ROVING FRAMES

Equipment for weighting arms PK 5025-1259 471 and PK 5035-1259 473
 (Equipment is not included in scope of delivery of weighting arm)

Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref. No.	Position in weighting arm ²⁾
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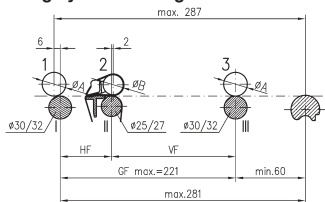
Front and rear top roller:

90			LP 1015-1253 745	1/3
100			LP 1015-0025 227	1/3
110			LP 1015-0025 228	1/3

Top apron cradle, apron and apron top roller with cot (aprons for top roller \varnothing 25 mm):

90	OH 5022-6010 688 (OH short)	PR 40	LP 1015-1253 745	2
100	OH 5022-6004 092 (OH short)	PR 40	LP 1015-0025 227	2
110	OH 5022-1259 297 (OH short)	PR 40	LP 1015-0025 228	2
110	OH 5042-1259 506 (OH medium)	PR 4010	LP 1015-0025 228	2
110	OH 5245-1260 370 (OH long)	PR 4011	LP 1015-0025 228	2

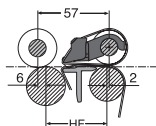
Drafting system setting



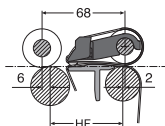
	Top roller \varnothing in mm	
	\varnothing A	\varnothing B
PK 5025	28	25
PK 5035	35	25

- ¹⁾ Ref.Nos. mentioned are for top rollers without cots.
 Cot quality according to customers' request.
- ²⁾ Position in weighting arm: 1 = Front 1
 (see fig. above) 2 = Middle 2
 3 = Rear 3

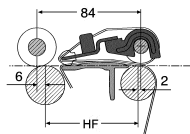
Dimensions are shown in mm.



OH 5022



OH 5042



OH 5245

Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm				Max. fibre length mm
		HF	VF min.	VF common	GF mm max.	
PK 5025-1259 471	OH 5022	49	40.5	³⁾	221	45
	OH 5042	60	40.5	³⁾	221	54
	OH 5245	76	40.5	³⁾	221	60
PK 5035-1259 473	OH 5022	49	40.5	³⁾	221	45
	OH 5042	60	40.5	³⁾	221	54
	OH 5245	76	40.5	³⁾	221	60

Distance clips OLC for top apron cradles⁴⁾

OH 5022	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5042	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5245	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green

PK 5025 and PK 5035

Bottom roller diameter in mm: ⁵⁾	Front I	30 / 32
	Middle II	25 / 27
	Rear III	30 / 32

³⁾ The distance VF_{common} depends on the fibre to be spun and fibre length

⁴⁾ Basic supply of distance clip. Clips are not included in OH supply.

⁵⁾ Diameters shown for bottom rollers are mere reference values.



WEIGHTING ARMS PK 5000

EQUIPMENT AND DRAFTING SYSTEM DATA

COTTON ROVING FRAMES

Equipment for weighting arms PK 5025-1259 472 and PK 5035-1259 474
(Equipment is not included in scope of delivery of weighting arm)

Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref. No.	Position in weighting arm ²⁾
----------------	---------------------	-------	---	---

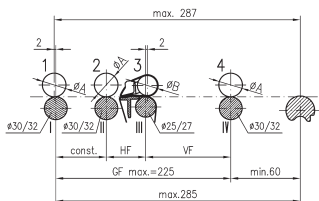
Front and rear top roller:

90			LP 1015-1253 745	1/2/4
100			LP 1015-0025 227	1/2/4
110			LP 1015-0025 228	1/2/4

Top apron cradle, apron and apron top roller with cot (aprons for top roller Ø 25 mm):

90	OH 5022-6010 688 (OH short)	PR 40	LP 1015-1253 745	3
100	OH 5022-6004 092 (OH short)	PR 40	LP 1015-0025 227	3
110	OH 5022-1259 297 (OH short)	PR 40	LP 1015-0025 228	3
110	OH 5042-1259 506 (OH medium)	PR 4010	LP 1015-0025 228	3

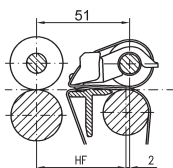
Drafting system setting



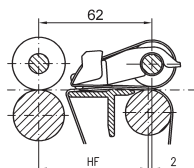
	Top roller Ø in mm	
	Ø A	Ø B
PK 5025	28	25
PK 5035	35	25

Dimensions are shown in mm.

- 1) Ref.Nos. mentioned are for top rollers without cots.
Cot quality according to customers' request.
- 2) Position in weighting arm: 1 = Front 1 2 = Middle 2
(see fig. above) 3 = Middle 3 4 = Rear 4



OH 5022



OH 5042

Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm					Max. fibre length mm
		HF	Minimum setting ³⁾	VF min.	VF common	GF mm max.	
PK 5025-1259 472	OH 5022	49	36.5	40.5	⁴⁾	225	45
	OH 5042	60	36.5	40.5	⁴⁾	225	54
PK 5035-1259 474	OH 5022	49	36.5	40.5	⁴⁾	225	45
	OH 5042	60	36.5	40.5	⁴⁾	225	54

Distance clips OLC for top apron cradles⁵⁾

OH 5022	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5042	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green

PK 5025 and PK 5035		
Bottom roller diameter in mm: ⁵⁾	Front I	30 / 32
	Middle II	30 / 32
	Middle III	25 / 27
	Rear IV	30 / 32

³⁾ The figure mentioned is the shortest possible distance of the bottom rollers depending on the PK-construction. Enlarged distances depend on the condensers and the field distance setting.

⁴⁾ The distance VF_{common} depends on the fibre to be spun and fibre length. The values are to be gathered in practical use.

⁵⁾ Diameters shown for bottom rollers are mere reference values.

⁶⁾ Basic supply of distance clip. Clips are not included in OH supply.



WEIGHTING ARMS PK 5000

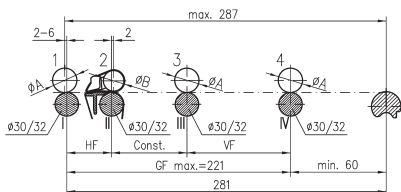
EQUIPMENT AND DRAFTING SYSTEM DATA

COTTON ROVING FRAMES

Equipment for weighting arms PK 5025-1260 632 and PK 5035-6010 014
(Equipment is not included in scope of delivery of weighting arm)

Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref. No.	Position in weighing arm ²⁾
Front and rear top roller:				
90			LP 1015-1253 745	1/3/4
100			LP 1015-0025 227	1/3/4
110			LP 1015-0025 228	1/3/4
Top apron cradle, apron and apron top roller with cot (aprons for top roller Ø 25 mm):				
90	OH 5022-6010 688 (OH short)	PR 40	LP 1015-1253 745	2
100	OH 5022-6004 092 (OH short)	PR 40	LP 1015-0025 227	2
110	OH 5022-1259 297 (OH short)	PR 40	LP 1015-0025 228	2
110	OH 5042-1259 506 (OH medium)	PR 4010	LP 1015-0025 228	2

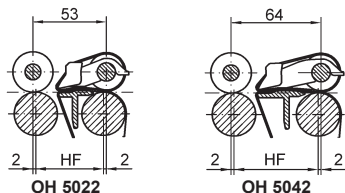
Drafting system setting



	Top roller Ø in mm	
	Ø A	Ø B
PK 5025	28	25
PK 5035	35	25

Dimensions are shown in mm.

- 1) Ref.Nos. mentioned are for top rollers without cots.
Cot quality according to customers' request.
- 2) Position in weighing arm: 1 = Front 1
(see fig. above) 2 = Middle 2
 3 = Middle 3
 4 = Rear 4



Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm					Max. fibre length mm
		HF	Minimum setting ³⁾	VF min.	VF common	GF mm max.	
PK 5025-1260 632	OH 5022	49	36.5	41.5	⁴⁾	221	45
	OH 5042	60	36.5	41.5	⁴⁾	221	54
PK 5035-6010 014	OH 5022	49	36.5	41.5	⁴⁾	221	45
	OH 5042	60	36.5	41.5	⁴⁾	221	54

Distance clips OLC for top apron cradles⁵⁾

OH 5022	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5042	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green

PK 5025 and PK 5035		
Bottom roller diameter in mm: ⁵⁾	Front I	30
	Middle II	30
	Middle III	30
	Rear IV	30

³⁾ The figure mentioned is the shortest possible distance of the bottom rollers depending on the PK-construction. Enlarged distances depend on the condensers and the draft field distance setting.

⁴⁾ The distance VF_{common} depends on the fibre to be spun and fibre length. The values are to be gathered in practical use.

⁵⁾ Diameters shown for bottom rollers are mere reference values.

⁶⁾ Basic supply of distance clip. Clips are not included in OH supply.



WEIGHTING ARMS PK 1550

Application

3-roller double apron drafting system for roving frames.

With top apron cradle OH 5022 for cotton and synthetic fibres up to approx. 45 mm length.

With cradle OH 5042 for long cotton fibres and synthetics up to 54 mm.

With cradle OH 5245 for synthetics up to approx. 60 mm fibre length.

See as well chapter 10, page 86.

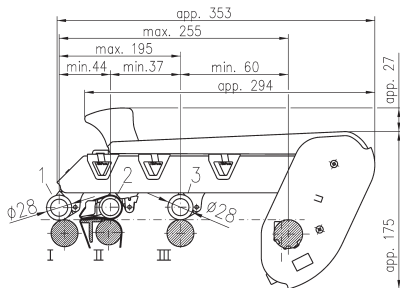
Load position	Front element		Middle element	
	Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾

PK 1550-6008 948

1	20	28	10	25
2	25		15	
3	30		20	

PK 1550-6008 949

1	20	35	10	25
2	25		15	
3	30		20	



PK 1550-6008 948

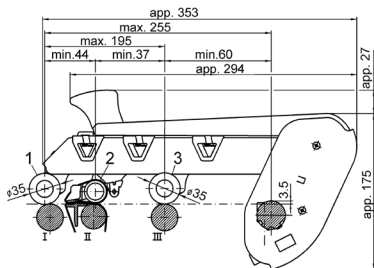
Dimensions are shown in mm.
Distances for top roller holders are shown in mm.

Roving frames

Cotton mills



	Rear element		Clearer roller holder ¹⁾ for front of arm Ref. No.	Application
	Load in daN	Top roller Ø in mm ¹⁾		
	15	28	PFE-0996 685	
	20			
	25			
	15	35	PFE-0996 685	PK 1550-6008 949 is mainly used for spinning of longer fibres.
	20			
	25			



PK 1550-6008 949

Dimensions are shown in mm.

¹⁾ Front clearer roller holders are delivered separately on special order.



WEIGHTING ARMS PK 1550

EQUIPMENT AND DRAFTING SYSTEM DATA

COTTON ROVING FRAMES

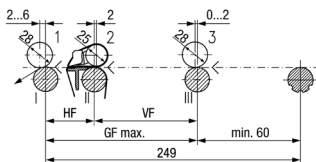
Equipment for weighting arms PK 1550-6008 948 and PK 1550-6008 949
(Equipment is not included in scope of delivery of weighting arm)

Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref.No.	Position in weigh- ting arm ²⁾
Front and rear top roller:				
90			LP 1015-1253 745	1/3
100			LP 1015-0025 227	1/3
110			LP 1015-0025 228	1/3
Top apron cradle, apron and apron top roller with cot (aprons for top roller $\varnothing = 25$ mm):				
90	OH 5022-6010 688 (OH short)	PR 40	LP 1015-1253 745	2
100	OH 5022-6004 092 (OH short)	PR 40	LP 1015-0025 227	2
110	OH 5022-1259 297 (OH short)	PR 40	LP 1015-0025 228	2
110	OH 5042-1259 506 (OH medium)	PR 4010	LP 1015-0025 228	2
110	OH 5245-1260 370 (OH long)	PR 4011	LP 1015-0025 228	2

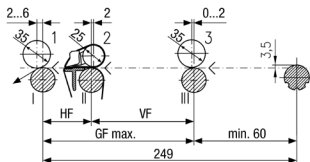
- ¹⁾ Ref.Nos. mentioned are for top rollers without cots.
Cot quality according to customers' request.
- ²⁾ Position in weighting arm: 1 = Front 1
(see fig. on next page) 2 = Middle 2
3 = Rear 3
- ³⁾ The mentioned draft field distances take a front zone condenser into account.
Without front zone condenser the front zone (HF) can be shortened.
- ⁴⁾ The distance $V_{F_{common}}$ depends on the fibre to be spun and fibre length.
The values are to be gathered in practical use.
- ⁵⁾ Diameters shown for bottom rollers are mere reference values.
- ⁶⁾ Basic supply of distance clip. Clips are not included in OH supply.



Drafting system setting³⁾



PK 1550-6008 948



PK 1550-6008 949

Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm				Max. fibre length mm
		HF	VF min.	VF common	GF mm max.	
PK 1550-6008 948	OH 5022	49	40	⁴⁾	189	45
	OH 5042	60	40	⁴⁾	189	54
	OH 5245	76	40	⁴⁾	189	60
PK 1550-6008 949	OH 5022	49	40	⁴⁾	189	45
	OH 5042	60	40	⁴⁾	189	54
	OH 5245	76	40	⁴⁾	189	60

Distance clips OLC for top apron cradles⁶⁾

OH 5022	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5042	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5245	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green

PK 1550		
Bottom roller diameter in mm: ⁵⁾	Front I	30/32
	Middle II	25/27
	Rear III	30/32



WEIGHTING ARMS PK 1550

Application

4-roller double apron drafting system for roving frames.

With top apron cradle OH 5022 for cotton and synthetic fibres up to approx. 45 mm fibre length.

See as well chapter 10, page 86.

Dimensions are shown in mm.

Roving frames

Cotton mills

Chapter 5-32

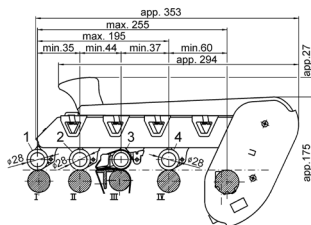
Load position	Front 1 element		Middle 2 element	
	Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾

PK 1550-6008 947 PK 1550-6024 621

1	9	28	15	28
2	12		20	
3	15		25	

PK 1550-6017 295

1	20	28	10	25
2	25		15	
3	30		20	

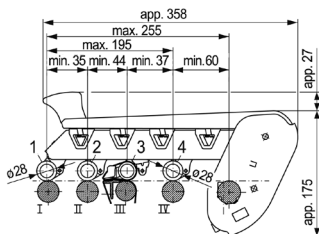


PK 1550-6008 947

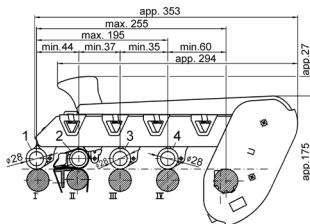
Dimensions are shown in mm.



Middle 3 element		Rear 4 element		Clearer roller holder ¹⁾ for front of arm Ref. No.	Application
Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾		
10	25	10	28	PFE-0996 685	PK 1550-6008 947 and PK 1550-6024 621 with top apron cradles OH 5022 for fibres up to to approx. 45 mm
15		15			
20		20			
10	28	10	28	PFE-0996 685	PK 1550-6017 295 with top apron cradles OH 5022 for fibres up to to approx. 45 mm
15		15			
20		20			



PK 1550-6024 621



PK 1550-6017 295

Dimensions are shown in mm.

¹⁾ Front clearer roller holders are delivered separately on special order.



WEIGHTING ARMS PK 1550

EQUIPMENT AND DRAFTING SYSTEM DATA

COTTON ROVING FRAMES

Equipment for weighting arms PK 1550-6008 947, PK 1550-6024 621 and PK 1550-6017 295

(Equipment is not included in scope of delivery of weighting arm)

Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref.No.	Position in weighing arm ²⁾
Front and rear top roller:				
90			LP 1015-1253 745	1/2/3*/4
100			LP 1015-0025 227	1/2/3*/4
110			LP 1015-0025 228	1/2/3*/4
Top apron cradle, apron and apron top roller with cot (aprons for top roller Ø = 25 mm):				
90	OH 5022-6010 688 (OH short)	PR 40	LP 1015-1253 745	2*/3
100	OH 5022-6004 092 (OH short)	PR 40	LP 1015-0025 227	2*/3
110	OH 5022-1259 297 (OH short)	PR 40	LP 1015-0025 228	2*/3

¹⁾ Ref. Nos. mentioned are for top rollers without cots. Cot quality according to customers' request.

In case of 4-roller-types PK 1550-6008 947 and PK 1550-6024 621 top roller combination is 28-28-25-28 mm and 28-25-28-28 mm at PK 1550-6017 295.

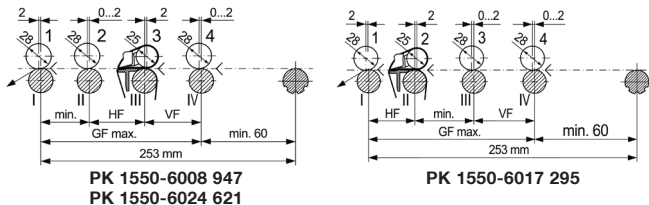
For all three weighting arms top rollers are LP1015- / LP1015- / LP 1015- / LP 1015-. Normally the OH 5022 is used.

²⁾ Position in weighting arms PK 1550-6008 947 and PK 1550-6024 621 (see fig. on next page): 1 = Front 1 | 2 = Middle 2 | 3 = Middle 3 | 4 = Rear 4

* Position in weighting arm PK 1550-6017 295.



Drafting system setting



Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm					Max. fibre length mm
		HF	Minimum setting ³⁾	VF min.	VF common	GF mm max.	
PK 1550-6008 947	OH 5022	49	34	40	⁴⁾	193	45
PK 1550-6017 295	OH 5022	49	34	40	⁴⁾	193	45
PK 1550-6024 621	OH 5022	49	34	40	⁴⁾	193	45

Distance clips OLC for top apron cradles⁵⁾

OH 5022 OLC-0964 104 white OLC-0964 106 black OLC-0964 108 green

	PK 1550-6008 947	PK 1550 - 6024 621	PK 1550-6017 295			
Bottom roller diameter in mm: ⁵⁾	Front I	30 / 32	Front I	30 / 32	Front I	30 / 32
	Middle II	30 / 32	Middle II	30 / 32	Middle II	25 / 32
	Middle III	25 / 32	Middle III	25 / 32	Middle III	30 / 32
	Rear IV	30 / 32	Rear IV	30 / 32	Rear IV	30 / 32

³⁾ The figure mentioned is the shortest possible distance of the bottom rollers depending on the PK-construction. Enlarged distances depend on the condensers and the field distance setting.

⁴⁾ The distance VF_{common} depends on the fibre to be spun and fibre length. The values are gathered in practical use.

⁵⁾ Diameters shown for bottom rollers are mere reference values.

⁶⁾ Basic supply of distance clip. Clips are not included in OH supply.



WEIGHTING ARMS PK 1580

Application

3-roller double apron drafting system for Zinser roving frames only.

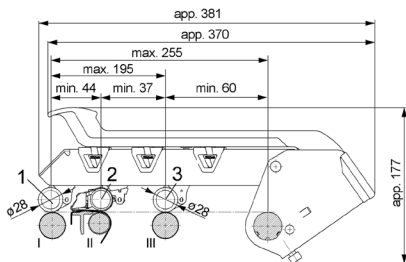
With top apron cradle OH 5022 for cotton and synthetic fibres up to approx. 45 mm length.

With cradle OH 5042 for long cotton fibres and synthetics up to 54 mm.

With cradle OH 5245 for synthetics up to approx. 60 mm fibre length.

See as well chapter 10, page 93.

Load position	Front element	
	Load in daN	Top roller Ø in mm ¹⁾
PK 1580-6030 302		
1	20	28
2	25	
3	30	
PK 1580-6030 307		
1	20	35
2	25	
3	30	



PK 1580-6030 302

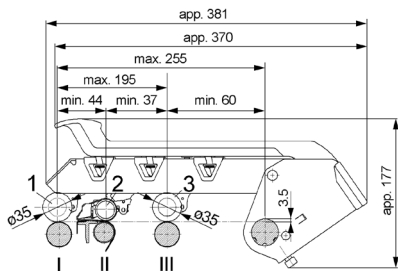
Dimensions are shown in mm.
Distances for top roller holders are shown in mm.

Roving frames

Cotton mills



Middle element		Rear element		Application
Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾	
10	25	15	28	
15		20		
20		25		
10	25	15	35	PK 1580-6030 307 is mainly used for spinning of longer fibres.
15		20		
20		25		



PK 1580-6030 307

Dimensions are shown in mm.



WEIGHTING ARMS PK 1580

EQUIPMENT AND DRAFTING SYSTEM DATA

COTTON ROVING FRAMES

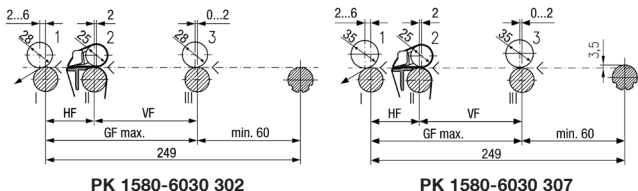
Equipment for weighting arms PK 1580-6030 302 and PK 1580-6030 307
(Equipment is not included in scope of delivery of weighting arm)

Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref.No.	Position in weigh- ting arm ²⁾
Front and rear top roller:				
90			LP 1015-1253 745	1/3
100			LP 1015-0025 227	1/3
110			LP 1015-0025 228	1/3
Top apron cradle, apron and apron top roller with cot (aprons for top roller Ø = 25 mm):				
90	OH 5022-6010 688 (OH short)	PR 40	LP 1015-1253 745	2
100	OH 5022-6004 092 (OH short)	PR 40	LP 1015-0025 227	2
110	OH 5022-1259 297 (OH short)	PR 40	LP 1015-0025 228	2
110	OH 5042-1259 506 (OH medium)	PR 4010	LP 1015-0025 228	2
110	OH 5245-1260 370 (OH long)	PR 4011	LP 1015-0025 228	2

- 1) Ref.Nos. mentioned are for top rollers without cots.
Cot quality according to customers' request.
- 2) Position in weighting arm: 1 = Front 1
(see fig. on next page) 2 = Middle 2
3 = Rear 3
- 3) The mentioned draft field distances take a front zone condenser into account.
Without front zone condenser the front zone (HF) can be shortened.
- 4) The distance $V_{F_{common}}$ depends on the fibre to be spun and fibre length.
The values are to be gathered in practical use.
- 5) Diameters shown for bottom rollers are mere reference values.
- 6) Basic supply of distance clip. Clips are not included in OH supply.



Drafting system setting³⁾



Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm				Max. fibre length mm
		HF	VF min.	VF common	GF mm max.	
PK 1580-6030 302	OH 5022	49	40	⁴⁾	189	45
	OH 5042	60	40	⁴⁾	189	54
	OH 5245	76	40	⁴⁾	189	60
PK 1580-6030 307	OH 5022	49	40	⁴⁾	189	45
	OH 5042	60	40	⁴⁾	189	54
	OH 5245	76	40	⁴⁾	189	60

Distance clips OLC for top apron cradles⁵⁾

OH 5022	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5042	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5245	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green

	PK 1580	
Bottom roller diameter in mm:⁵⁾	Front I	30/32
	Middle II	25/27
	Rear III	30/32



WEIGHTING ARMS PK 1580

Application

4-roller double apron drafting system for Zinser roving frames only.

With top apron cradle OH 5022 for cotton and synthetic fibres up to approx. 45 mm fibre length.

See as well chapter 10, page 93.

Dimensions are shown in mm.

Roving frames

Cotton mills

Chapter 5-40

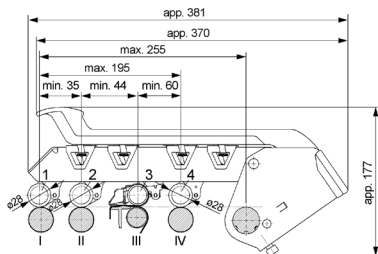
Load position	Front 1 element		Middle 2 element	
	Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾

PK 1580-6030 393

1	9	28	15	28
2	12		20	
3	15		25	

PK 1580-6030 392

1	20	28	10	25
2	25		15	
3	30		20	

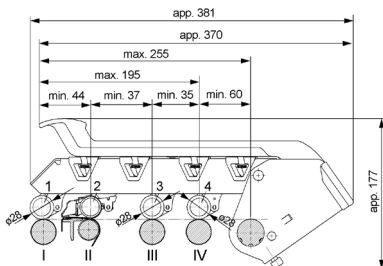


PK 1580-6030 393

Dimensions are shown in mm.



	Middle 3 element		Rear 4 element		Application
	Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾	
	10	25	10	28	PK 1580-6030 393 with top apron cradles OH 5022 for fibres up to approx. 45 mm
	15		15		
	20		20		
	10	28	10	28	PK 1580-6030 392 with top apron cradles OH 5022 for fibres up to approx. 45 mm
	15		15		
	20		20		



PK 1580-6030 392

Dimensions are shown in mm.



WEIGHTING ARMS PK 1580

EQUIPMENT AND DRAFTING SYSTEM DATA

COTTON ROVING FRAMES

Equipment for weighting arms PK 1580-6030 393 and PK 1580-6030 392
(Equipment is not included in scope of delivery of weighting arm)

Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref.No.	Position in weigh- ing arm ²⁾
Front and rear top roller:				
90			LP 1015-1253 745	1/2/3*/4
100			LP 1015-0025 227	1/2/3*/4
110			LP 1015-0025 228	1/2/3*/4
Top apron cradle, apron and apron top roller with cot (aprons for top roller Ø = 25 mm):				
90	OH 5022-6010 688 (OH short)	PR 40	LP 1015-1253 745	2*/3
100	OH 5022-6004 092 (OH short)	PR 40	LP 1015-0025 227	2*/3
110	OH 5022-1259 297 (OH short)	PR 40	LP 1015-0025 228	2*/3

¹⁾ Ref. Nos. mentioned are for top rollers without cots. Cot quality according to customers' request.

In case of 4-roller-type PK 1580-6030 393 top roller combination is 28-28-25-28 mm and 28-25-28-28 mm at PK 1580-6030 392.

For both weighting arms top rollers are LP1015- / LP1015- / LP 1015- / LP 1015-.
Normally the OH 5022 is used.

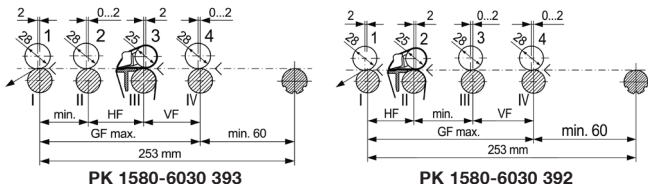
²⁾ Position in weighting arm PK 1580-6030 393 (see fig. on next page):

1 = Front 1 | 2 = Middle 2 | 3 = Middle 3 | 4 = Rear 4

* Position in weighting arm PK 1580-6030 392.



Drafting system setting



Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Field distances in mm					Max. fibre length mm
		HF	Minimum setting ³⁾	VF min.	VF common	GF mm max.	
PK 1580-6030 393	OH 5022	49	34	40	4)	193	45
PK 1580-6030 392	OH 5022	49	34	40	4)	193	45

Distance clips OLC for top apron cradles⁶⁾

OH 5022 OLC-0964 104 white OLC-0964 106 black OLC-0964 108 green

	PK 1580-6030 393	PK 1580-6030 392
Bottom roller diameter in mm:⁵⁾	Front I	30 / 32
	Middle II	30 / 32
	Middle III	25 / 32
	Rear IV	30 / 32

³⁾ The figure mentioned is the shortest possible distance of the bottom rollers depending on the PK-construction. Enlarged distances depend on the condensers and the field distance setting.

⁴⁾ The distance VF_{common} depends on the fibre to be spun and fibre length. The values are gathered in practical use.

⁵⁾ Diameters shown for bottom rollers are mere reference values.

⁶⁾ Basic supply of distance clip. Clips are not included in OH supply.



WEIGHTING ARM PK 6000

Application

Ring spinning machine with 3-roller double apron drafting system PK 6000. The drafting system works according to the slip-draft principle. Apron top roller as recessed roller.

With top apron cradle OH 6022 for all kinds of wool and synthetic fibres up to 200 mm fibre length and blends of these.

Preparation:
Classical worsted yarn assortment with finishing machine or worsted roving frame.

See as well chapter 10, page 110.

Types
Ref.no.

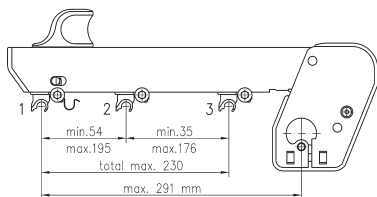
PK 6000-1252 924¹⁾

Operating
pressure



Load on top roller (daN)
Front 1 Middle 2 Rear

	17	7.5	14
	36	16.8	33
Top roller for PK 6000 Ø mm²⁾	50	33	50



PK 6000 - 1252 924

Ring spinning machines
Roving frames

Worsted mills

Dimensions are shown in mm.

¹⁾ Pneumatic loading; air pressure required.

²⁾ Dia. values refer to top rollers covered with new cots.



**Mono clearer
roller holder
Ref.no.**

Remarks

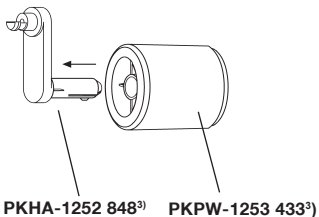
PKHA-1252 848³⁾

2 pcs. front clearer roller holders
are needed for each weighting arm, one per clearer
roller

**Mono clearer roller
Ref. no.**

PKPW-1253 433³⁾

for gauges 75 mm and 82.5 mm
2 pcs. clearer rollers are needed for each
weighting arm



³⁾ Clearer roller holder PKHA-1252 848 and PKPW-1253 433 will be supplied on request as separate item.



WEIGHTING ARM PK 6000

EQUIPMENT AND DRAFTING SYSTEM DATA

WORSTED RING SPINNING MACHINES

Equipment for weighting arm PK 6000-1252 924

(Equipment is not included in scope of delivery of weighting arm)

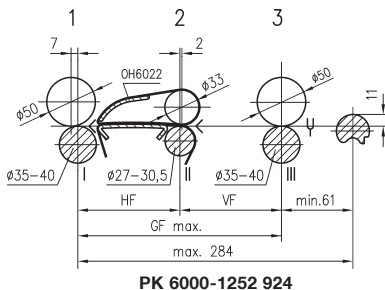
Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref. No.	Position in weighting arm ²⁾
Front and rear top roller:				
75			LP 1014-1253 740	1/3
82.5			LP 1014-1253 741	1/3
Top apron cradle, apron and apron top roller with cot (aprons for top roller Ø 33 mm):				
75	OH 6022-1254 311	PR 32	LP 1014-1253 740	2
82.5	OH 6022-1254 312	PR 40	LP 1015-1253 744	2

¹⁾ Ref.Nos.mentioned are for top rollers without cots.
Cot quality according to customers' request.

²⁾ Position in weighting arm: 1 = Front 1
(see fig. on next page) 2 = Middle 2
3 = Rear 3



Drafting system setting



Dimensions are shown in mm.

Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Bottom roller diameter			Draft field mm			Total draft field GF mm	Fibre length max. mm
		I	II	III	HF	VF	VF common		
PK 6000-1252 924	OH 6022	35/40	27/30.5	35/40	105	57 ³⁾	4)	223	200

Distance clips OLC for top apron cradles⁵⁾

OH 6022	OLC-0964 120 black ⁶⁾	OLC-0004 587 beige ⁶⁾	OLC-0004 588 green ⁶⁾	OLC-0004 589 pink	OLC 0964 123 blue
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³⁾ Without rear zone condenser the rear zone setting reduces to 45 mm at min.

⁴⁾ The distance VF_{common} depends on the fibre to be spun and fibre length.

⁵⁾ For normal bottom apron nose bar.

⁶⁾ Basic supply of distance clip. Clips are not included in OH supply.



WEIGHTING ARM PK 1660

Application

Ring spinning machine with 3-roller double apron drafting system
PK 1660-6009 934.

Apron top roller as recessed roller.

With top apron cradle OH 2402 or OH 554:
all kinds of wool and synthetic fibres or blends of both types up to 200 mm fibre length.

Preparation:
Classical worsted yarn assortment with finishing machine or worsted roving frame.

See as well chapter 10, page 115.

Load position	Front element 1		Middle element 2	
	Load in daN	Top roller Ø in mm ¹⁾	Load in daN	Top roller Ø in mm ¹⁾
PK 1660-6009 934				
1	20	50	9	48
2	27		12	
3	35		15	

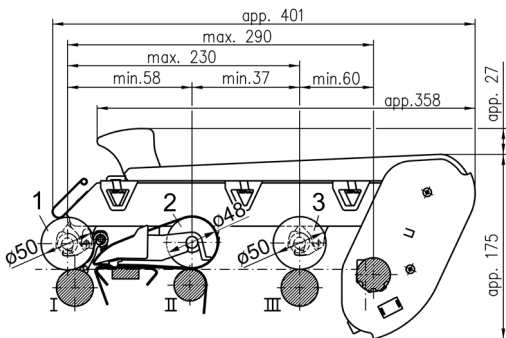
Ring spinning machines
Roving frames

Worsted mills

¹⁾ Dia. values refer to top rollers covered with new cots.



Rear element 3		Clearer roller holder ¹⁾ for front of arm Ref. No.
Load in daN	Top roller Ø in mm ¹⁾	
20	50	PFE-0996 685
25		
30		



PK 1660-6009 934

Dimensions are shown in mm.

- ²⁾ Clearer roller holders will be supplied on request as separate items.
Condensers are shown on chapter 6 pages 38-41.



WEIGHTING ARM PK 1660

EQUIPMENT AND DRAFTING SYSTEM DATA

WORSTED RING SPINNING MACHINES

Equipment for weighting arm PK 1660-6009 934

(Equipment is not included in scope of delivery of weighting arm)

Gauge Tw in mm	Top apron cradle OH	Apron	Top roller ¹⁾ (without cot) Ref.No.	Position in weighting arm ²⁾
Front and rear top roller:				
75			LP 1014-1253 740	1/3
82.5			LP 1014-1253 741	1/3
90			LP 1014-1253 742	1/3
Top apron cradle, apron and apron top roller with cot (aprons for top roller Ø = 48 mm):				
75	OH 2402-1253 436	PR 3217	LP 1016-1256 711	2
	OH 554-0962 767*	PR 325	LP 1016-1256 711	2
82.5	OH 2402-1253 437	PR 4017	LP 1017-1256 712	2
	OH 554-0962 768*	PR 405	LP 1017-1256 712	2

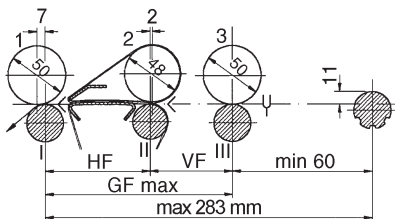
* OH 554 available until using-up of stock.

¹⁾ Ref.Nos. mentioned are for top rollers without cots.
Cot quality according to customers' request.

²⁾ Position in weighting arm: 1 = Front 1
(see fig. on next page) 2 = Middle 2
3 = Rear 3



Drafting system setting



PK 1660-6009 934

Draft field settings and max. fibre length

Weighting arm PK	Top apron cradle OH	Bottom roller diameter			Draft field mm			Total draft field GF mm	Fibre length max. mm
		I	II	III	HF	VF min	VF common		

with bottom apron nose bar:

PK 1660-6009 934	OH 2402	35/40	27/30.5	35/40	105	57 ⁵⁾	6)	223	200
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Distance clips OLC for top apron cradles⁴⁾

OH 2402	OLC-0964 120 black ³⁾	OLC-0004 587 beige ³⁾	OLC-0004 588 green ³⁾
OH 554	OLC-0964 120 black ³⁾	OLC-0004 587 beige ³⁾	OLC-0004 588 green ³⁾

³⁾ Basic supply of distance clip. Clips are not included in OH supply.

⁴⁾ For normal bottom apron nose bar.

⁵⁾ Without rear zone condenser the rear zone setting reduces to 45 mm at min.

⁶⁾ The distance VF_{common} depends on the fibre to be spun and fibre length.



ADJUSTMENT TOOLS WEIGHTING ARMS PK 2600 SE SERIES

Application

For drafting systems with weighting arms PK 2630 SE, PK 2635 SE, PK 2655 SE and PK 2665 SE.

See also chapter 5 pages 2-9 and chapter 10, pages 37-48.

* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (6018 064).

Optional accessories:

These adjustment tools are supplied on special request.












Ring spinning machines

Cotton mills

Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	6018 064	
Height gauge	6026 113	
Allen key SW 5	0997 491	
Draft field gauge	6018 550	
Allen key SW 4	0993 570	
Allen key SW 3	1255 216	
Optional accessories:		
Screwdriver bit SW 5	0997 455	
Screwdriver bit SW 6	0997 454	
Distance gauge	0011 687	
Ratchet 1/4"	0997 453	
Caliper gauge with prism cheeks	0026 840	
Torque wrench with inserts (2 - 25 Nm)	6023 027	

SPARE PARTS WEIGHTING ARMS PK 2600 SE SERIES



Spare parts	Types Ref.no.	Symbol	Front clearer roller	
Clearer roller cap	6012 134		Gauge Tw in mm	Front clearer roller Ref. no.
Height setting screw	6020 496		70	6010 654
Load indicator	6021 983		75	6010 609
Load indicator frame	6021 988		82.5	1247 967
Locking screw	6020 713		Top apron cradles	
Saddle spring	0908 119		OH 2022: see chapter 6, pages 2-3	
Screw hexagon socket	0007 809		OH 2122: see chapter 6, pages 4-5	
Washer	0732 304		OH 2132: see chapter 6, pages 6-7	
Weighting element	6011 648		OH 2142: see chapter 6, pages 10-11	
Weighting element middle	6013 405		OH 122: see chapter 6, pages 14-15	
Weighting element V-Draft	6016 853		Top rollers	
			LP 1002: see chapter 3, pages 2-3	
			LP 1003: see chapter 3, page 4	
			Cots & aprons	
			see chapter 3, pages 12-13 and chapter 6, pages 34-35	

Distance clips OLC for top apron cradles

OH 2022	OLC-0964 118 yellow	OLC-0017 705 lilac	OLC-0964 119 white
OH 2122	OLC-0017 705 lilac	OLC-0964 119 white	OLC-0017 627 grey
OH 2132	OLC-0017 705 lilac	OLC-0964 119 white	OLC-6006 661 light green
OH 2142	OLC-0964 117 red	OLC-0964 118 yellow	OLC-0964 119 white
OH 122	OLC-0964 118 yellow	OLC-0964 119 white	OLC-0017 627 grey



ADJUSTMENT TOOLS WEIGHTING ARMS PK 2630 SEH

Application

For drafting systems with weighting arms PK 2630 SEH.

See also chapter 5, pages 10-13 and chapter 10, pages 49-56.

* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (6025 549).

Optional accessories:

These adjustment tools are supplied on special request.


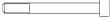








Ring spinning machines

Cotton mills

Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	6025 549	
Height gauge	6026 113	
Allen key SW 5	0997 491	
Draft field gauge	6009 660	
Allen key SW 3	1255 216	
Allen key SW 6	0997 445	
Optional accessories:		
Screwdriver bit SW 5	0997 455	
Screwdriver bit SW 6	0997 454	
Distance gauge	0011 687	
Ratchet 1/4"	0997 453	
Caliper gauge with prism cheeks	0026 840	
Torque wrench with inserts (2 - 25 Nm)	6023 027	

SPARE PARTS WEIGHTING ARMS PK 2630 SEH



Spare parts	Types Ref.no.	Symbol	Front clearer roller	
Clearer roller cap	6023 618		Gauge Tw in mm	Front clearer roller Ref. no.
Height setting screw	6009 435		70	6010 654
Load indicator	6021 983		75	6010 609
Load indicator frame	6021 988		Additional single clearer roller 6008 568 required.	
Locking screw	6021 608			
Saddle spring	0908 119			
Screw hexagon socket	0007 809			
Washer	0732 304			
Weighting element rear	6017 232			
Weighting element	6011 648			

Top apron cradles

OH 2122: chapter 6, p. 4-5

OH 2132: chapter 6, p. 6-7

OH 2142: chapter 6, p. 10-11

Top rollers

LP 1002: chapter 3, p. 2-3

LP 1003: chapter 3, p. 4

Cots & aprons

chapter 3, pages 12-13

chapter 6, pages 34-35

Distance clips OLC for top apron cradles

OH 2122	OLC-0017 705 lilac	OLC-0964 119 white	OLC-0017 627 grey
OH 2132	OLC-0017 705 lilac	OLC-0964 119 white	OLC-6006 661 light green
OH 2142	OLC-0964 117 red	OLC-0964 118 yellow	OLC-0964 119 white



ADJUSTMENT TOOLS WEIGHTING ARMS PK 3000 SERIES

Application

For drafting systems with weighting arms PK 3025 and PK 3035.

* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (1259 672).

Optional accessories:

These tools are supplied on special request.










Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	1259 672	
Height gauge	1260 156	
Allen key SW 4	0993 570	
Draft field gauge	6001 102	
Allen key SW 3	1255 216	
Long screw driver bit SW 6 for wrench 1/4"	1255 195	
Ratchet 1/4" (handle reversible)	0997 453	
Pliers for cover	1255 145	
Spanner (size 8)	1255 215	
Ball-screwdriver SW3	1259 713	
Height setting control gauge	6001 918	
Torque wrench with inserts (2-25 Nm)	6023 027	
Optional accessories:		
Tube cutter	6001 490	
Torque key with inserts 3/8"-1/4" (5-50 Nm)	6004 461	

Ring spinning machines

Cotton mills

SPARE PARTS WEIGHTING ARMS PK 3000 SERIES



Spare parts	Types Ref.no.	Symbol	Clearer roller	
			Gauge Tw in mm	Front clearer roller holder Ref. no.
Cover cap	1256 551			
Front and rear weighting element	6000 696		68.4	1258 593
Middle weighting element (for PK 3025)	6000 695		75	-
Middle weighting element (for PK 3035)	1259 709		82.5	-
Pneumatic spring	1257 283			
Connecting piece	1258 491		68.4	1259 669
T-joint	1259 647		75	1259 669
L-quick-connector	1257 477		82.5	1253 433
Pneumatic Unit with air filter, automatic con- densate separator and pressure monitor	1261 445			

Top apron cradles

OH 2022: chapter 6, p. 2-3

OH 2122: chapter 6, p. 4-5

OH 2142: chapter 6, p. 10-11

Top rollers

LP 1002: chapter 3, p. 2-3

LP 1003: chapter 3, p. 4

Cots & aprons

chapter 3, pages 12-13

chapter 6, pages 34-35

Distance clips OLC for top apron cradles

OH 2022	OLC-0964 118 yellow	OLC-0017 705 lilac	OLC-0964 119 white
OH 2122	OLC-0017 705 lilac	OLC-0964 119 white	OLC-0017 627 grey
OH 2142	OLC-0964 117 red	OLC-0964 118 yellow	OLC-0964 119 white



ADJUSTMENT TOOLS WEIGHTING ARMS PK 2100 SERIES

Application

For drafting systems with weighting arms PK 2130, PK 2135, PK 2155 and PK 2165.


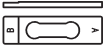

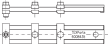






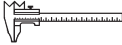
* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (6009 184).

Optional accessories:

These tools are supplied on special request.











Ring spinning machines

Cotton mills

Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	6009 184	
Height gauge	6009 255	
Allen key SW 5	0997 491	
Draft field gauge	6008 435	
Allen key SW 4	0993 570	
Distance gauge	0011 687	
Setting wrench	0998 222	
Optional accessories:		
Screwdriver bit SW 5	0997 455	
Screwdriver bit SW 6	0997 454	
Ratchet $\frac{1}{4}$ "	0997 453	
Caliper gauge with prism cheeks	0026 840	

SPARE PARTS WEIGHTING ARMS PK 2100 SERIES



Spare parts	Types Ref.no.	Symbol	Front clearer roller	
Adjusting pin	6006 506		Gauge Tw in mm	Front clearer roller Ref. no.
Front clearer roller holder	0908 212			68.4
Height setting screw	0910 371		75	6010 609
Load indicator	6005 506		82.5	1247 967
Load indicator frame	6004 612			
Locking screw	0910 361			
Rear weighting element (for PK 2130, PK 2135)	6009 424			
Rear weighting element (for PK 2155, PK 2165)	0735 376			
Saddle spring	0908 119			
Screw hexagon socket	0910 366			

Top apron cradles

OH 2022: chapter 6, p. 2-3

OH 2042: chapter 6, p. 8-9

OH 122: chapter 6, p. 14-15

Top rollers

LP 1002: chapter 3, p. 2-3

LP 1003: chapter 3, p. 4

Cots & aprons

chapter 3, pages 12-13

chapter 6, pages 34-35

Distance clips OLC for top apron cradles

OH 2022	OLC-0964 118 yellow	OLC-0017 705 lilac	OLC-0964 119 white
OH 2042	OLC-0964 117 red	OLC-0964 118 yellow	OLC-0964 119 white
OH 122	OLC-0964 118 yellow	OLC-0964 119 white	OLC-0017 627 grey






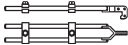







ADJUSTMENT TOOLS WEIGHTING ARMS PK 2000 SERIES

Application

For drafting systems with weighting arms PK 2025, PK 2035, PK 2055 and PK 2065.

* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (1251 683).

Optional accessories:
These tools are supplied on special request.









Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	1251 683	
Height gauge	0994 122	
Allen key SW 5	0997 491	
Draft field gauge	0997 440	
Allen key SW 4	1249 383	
Distance gauge	0011 687	
Setting wrench	0998 222	
Optional accessories:		
Screwdriver bit SW 5	0997 455	
Screwdriver bit SW 6	0997 454	
Ratchet $\frac{1}{4}$ "	0997 453	
Caliper gauge with prism cheeks	0026 840	

Ring spinning machines

Cotton mills

SPARE PARTS WEIGHTING ARMS PK 2000 SERIES



Spare parts	Types Ref.no.	Symbol	Front clearer roller	
Front clearer roller holder	0908 212		Gauge Tw in mm	Front clearer roller Ref. no.
Height setting screw	0910 371		68.4	6010 654
Locking screw	0910 361		75	6010 609
Rear weighting element (for PK 2025, PK 2035)	1251 340		82.5	1247 967
Rear weighting element (for PK 2055, PK 2065)	0735 376			
Saddle spring	0908 119			
Screw hexagon socket	0910 366			
Washer	0732 304			

Top apron cradles

OH 2022: chapter 6, p. 2-3
OH 2042: chapter 6, p. 8-9
OH 122: chapter 6, p. 14-15
OH 132: chapter 6, p. 12-13

Top rollers

LP 1002: chapter 3, p. 2-3
LP 1003: chapter 3, p. 4

Cots & aprons

chapter 3, pages 12-13
chapter 6, pages 34-35

Distance clips OLC for top apron cradles

OH 2022	OLC-0964 118 yellow	OLC-0017 705 lilac	OLC-0964 119 white
OH 2042	OLC-0964 117 red	OLC-0964 118 yellow	OLC-0964 119 white
OH 122	OLC-0964 118 yellow	OLC-0964 119 white	OLC-0017 627 grey



ADJUSTMENT TOOLS WEIGHTING ARMS PK 2000 PLUS SERIES

Application

For drafting systems with weighting arms PK 2025 Plus and PK 2035 Plus.

See also chapter 5, pages 14-17 and chapter 10, pages 57-67.

* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (6009 184).









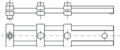

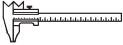
Optional accessories:

These tools are supplied on special request.

Ring spinning machines








Cotton mills

Chapter 5-62

Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	6009 184	
Height gauge	6009 255	
Allen key SW 5	0997 491	
Distance gauge	0011 687	
Allen key SW 4	0993 570	
Setting wrench	0998 222	
Optional accessories:		
Screwdriver bit SW 5	0997 455	
Screwdriver bit SW 6	0997 454	
Draft field gauge	6008 435	
Ratchet $\frac{1}{4}$ "	0997 453	
Caliper gauge with prism cheeks	0026 840	

SPARE PARTS WEIGHTING ARMS PK 2000 PLUS SERIES



Spare parts	Types Ref.no.	Symbol	Front clearer roller	
			Gauge Tw in mm	Front clearer roller Ref. no.
Clearer roller holder	0908 212		68.4	6010 654
Height setting screw	0910 371			
Locking screw	0910 361			
Rear weighting element	1251 340		75	6010 609
Saddle spring	0908 119		82.5	1247 967
Screw hexagon socket	0007 809			
Washer	6020 836			

Top apron cradles

OH 2022: chapter 6, p. 2-3
OH 2042: chapter 6, p. 8-9
OH 122: chapter 6, p. 14-15
OH 132: chapter 6, p. 12-13

Top rollers

LP 1002: chapter 3, p. 2-3
LP 1003: chapter 3, p. 4

Cots & aprons

chapter 3, pages 12-13
chapter 6, pages 34-35

Distance clips OLC for top apron cradles

OH 2022	OLC-0964 118 yellow	OLC-0017 705 lilac	OLC-0964 119 white
OH 2042	OLC-0964 117 red	OLC-0964 118 yellow	OLC-0964 119 white
OH 122	OLC-0964 118 yellow	OLC-0964 119 white	OLC-0017 627 grey



ADJUSTMENT TOOLS WEIGHTING ARMS PK 5000

Application

For drafting systems with weighting arms PK 5000.

See also chapter 5, pages 18-27 and chapter 10, pages 75-85.

* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (1259 479).

Optional accessories:

These tools are supplied on special request.

Ring spinning machines

Cotton mills

Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	1259 479	
Height gauge	1260 216	
Allen key SW 5	0993 551	
Draft field gauge	6000 639	
Allen key SW 4	0993 570	
Long screwdriver bit SW 6 for wrench 1/4"	1255 195	
Ratchet 1/4" (handle reversible)	0997 453	
Pliers for cover	1255 145	
Spanner size 8	1255 215	
Pliers for fitting of the connecting tube	1256 207	
Height setting gauge	6002 024	
Torque wrench with inserts (2 - 25 Nm)	6023 027	
Optional accessories:		
Tube cutter	6001 490	
Torque wrench w. inserts 3/8"-1/4" (5-50 Nm)	6004 461	

SPARE PARTS WEIGHTING ARMS PK 5000



Spare parts	Types Ref.no.	Symbol	Top apron cradles
Connecting pipe Tw 260	1259 480		OH 5022: see chapter 6, pages 16-17
Cover cap	1252 815		OH 5042: see chapter 6, pages 20-21
End piece	1259 498		OH 5245: see chapter 6, pages 24-25
L-quick-connector	1257 477		Top rollers LP 1015: see chapter 3, page 6
Pneumatic spring	1252 906		Cots & aprons see chapter 3, pages 14-15 and chapter 6, pages 34-35
Pneumatic unit with air filter, automatic condensate separator and pressure monitor	1261 444		
T-joint	1259 647		
Weighting element	6007 156		
Weighting element	6007 162		
Weighting element	6007 166		
Weighting element	6007 161		

Distance clips OLC for top apron cradles*

OH 5022	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5042	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5245	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green

* For normal bottom apron nose bar



ADJUSTMENT TOOLS WEIGHTING ARMS PK 1550 AND PK 1660

Application

For drafting systems with weighting arms PK 1550 and PK 1660.










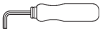

See also chapter 5, pages 28-35 and 48-51 and chapter 10, pages 86-92 and 115-118.

* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (6011 458).

Optional accessories:
These tools are supplied on special request.

Ring spinning machines
Roving frames

Cotton mills
Worsted mills

Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	6011 458	
Height gauge	0997 450	
Allen key SW 5	0993 551	
Draft field gauge	6010 919	
Setting wrench	6012 769	
Spanner SW 8	0993 580	
Ratchet 1/4"	0997 453	
Screwdriver bit SW 6	0997 454	
Optional accessories:		
Screwdriver bit SW 5	0997 455	
Screwdriver SW 6	0997 434	
Caliper gauge with prism cheeks	0026 840	

SPARE PARTS WEIGHTING ARMS PK 1550



Spare parts	Types Ref.no.	Symbol
Height setting screw	0910 811	
Indicator	6008 771	
Indicator long (for top apron cradle element of PK 1550-6008 949)	6010 002	
Locking screw	0910 368	
Saddle spring	6009 728	
Saddle spring (for top apron cradle element)	6007 081	
Screw	0007 809	
Screw	6010 007	

Top apron cradles

OH 5022: chapter 6, pages 16-17

OH 5042: chapter 6, pages 20-21

OH 5245: chapter 6, pages 24-25

Top rollers

LP 1015: chapter 3, page 6

Cots & aprons

chapter 3, pages 12-13






chapter 6, pages 34-35

Distance clips OLC for top apron cradles

OH 5022	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5042	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
OH 5245	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green



SPARE PARTS WEIGHTING ARMS PK 1660

Spare parts	Types Ref.no.	Symbol
Height setting screw	6010 770	
Indicator	6008 771	
Locking screw	6010 771	
Saddle spring	6009 728	
Screw	007 809	

Top apron cradles

OH 2402: chapter 6, pages 28-29

OH 554: chapter 6, pages 30-31

Top rollers

LP 1014: chapter 3, page 5

LP 1016: chapter 3, page 7

LP 1017: chapter 3, page 7

Cots & aprons

chapter 3, pages 12-13

chapter 6, pages 34-35

Distance clips OLC for top apron cradles*

OH 2402	OLC-0964 120 black	OLC-0004 587 beige	OLC-0004 588 green
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OH 554	OLC-0964 120 black	OLC-0004 587 beige	OLC-0004 588 green
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* For normal bottom apron nose bar

ADJUSTMENT TOOLS WEIGHTING ARMS PK 1580



Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	6031 337	
Gauge for front top roller	6024 519	
Draft field gauge	6031 342	
Height gauge	0997 450	
Setting wrench	6012 769	
Allen key (key 5)	0993 551	
Allen key (key 6)	6009 686	
Spanner (SW 8)	0993 580	
Ratchet 1/4"	0997 453	
Screwdriver bit SW 6	0997 454	
Optional accessories:		
Caliper gauge with prism cheeks	0026 840	

Application

For drafting systems with weighting arms PK 1580 .

See also chapter 5, pages 36-43 and chapter 10, pages 93-100.

* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (6031 337).









Optional accessories:
These tools are supplied as single item on special request.

Ring spinning machines
Roving frames

Cotton mills
Worsted mills



SPARE PARTS WEIGHTING ARMS PK 1580

Spare parts	Types Ref.no.	Symbol
Screw M6x12	PSR-0910 366	
Screw M6x16	PSR-0910 370	
Height setting screw	PSR-0910 811	
Locking screw	PSR-6020 713	
Indicator	PKAZ-6030 771	
Indicator long for top apron cradle element of PK 1580-6030 307 (35 mm top roller diameter)	PKAZ-6010 002	
Saddle spring	PFE 6029 921	
Saddle spring PSFE for top apron cradle element	6007 081	

Top apron cradles

OH 5022: chapter 6, pages 16-17

OH 5042: chapter 6, pages 20-21

OH 5245: chapter 6, pages 24-25

Top rollers

LP 1015: chapter 3, page 6

Cots & aprons

chapter 3, pages 12-13

chapter 6, pages 34-35

Distance clips OLC for top apron cradles

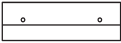










OH 5022 OLC-0964 104 white OLC-0964 106 black OLC-0964 108 green

OH 5042 OLC-0964 104 white OLC-0964 106 black OLC-0964 108 green

OH 5245 OLC-0964 104 white OLC-0964 106 black OLC-0964 108 green

ADJUSTMENT TOOLS WEIGHTING ARMS PK 1500 AND PK 1601



Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	0994 131	
Height gauge	0997 450	
Allen key SW 5	0993 551	
Draft field gauge	0997 451	
Setting wrench	6012 769	
Spanner SW 8	0993 580	
Ratchet 1/4"	0997 453	
Screwdriver bit SW 6	0997 454	
Optional accessories:		
Screwdriver bit SW 5	0997 455	
Allen key SW 6	0997 445	
Caliper gauge with prism cheeks	0026 840	

Application

For drafting systems with weighting arms PK 1500 and PK 1601.

* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (0994 131).








Optional accessories:
These tools are supplied on special request.

Ring spinning machines
Roving frames

Cotton mills
Worsted mills



SPARE PARTS WEIGHTING ARMS PK 1500

Spare parts	Types Ref.no.	Symbol
Clamp	0011 684	
Height setting screw	0910 811	
Locking screw	0910 368	
Saddle spring	0013 327	
Screw Screw M6 x 16	PSR-0910 370	
Screw hexagon socket	0910 366	
Washer	0017 065	

Top apron cradles

OH 514: chapter 6, pages 18-19

OH 534: chapter 6, pages 22-23

OH 524: chapter 6, pages 26-27

Top rollers

LP 1015: chapter 3, page 6

LP 1017: chapter 3, page 7

Cots & aprons

chapter 3, pages 12-13

chapter 6, pages 34-35

Distance clips OLC for top apron cradles









OH 514	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
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OH 534	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
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OH 524	OLC-0964 104 white	OLC-0964 106 black	OLC-0964 108 green
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SPARE PARTS WEIGHTING ARM PK 1601

Spare parts	Types Ref.no.	Symbol
Front clearer roller holder	0996 685	
Height setting screw	0910 811	
Lateral clearer roller holder	0727 593	
Locking screw	0910 368	
Saddle spring	0013 327	
Screw M6 x 16	PSR-0910 370	
Screw hexagon socket	0910 366	
Washer	0017 065	

Top apron cradles

OH 2402: chapter 6, pages 28-29

OH 554: chapter 6, pages 30-31

Top rollers

LP 1014: chapter 3, page 5

LP 1016: chapter 3, page 7

LP 1017: chapter 3, page 7

Cots & aprons

chapter 3, pages 12-13

chapter 6, pages 34-35

Distance clips OLC for top apron cradles*

OH 2402 OLC-0964 120 black OLC-0004 587 beige OLC-0004 588 green

OH 554 OLC-0964 120 black OLC-0004 587 beige OLC-0004 588 green

* For normal bottom apron nose bar



ADJUSTMENT TOOLS WEIGHTING ARM PK 6000

Application

For drafting systems with weighting arms PK 6000.

See also chapter 5, pages 44 - 47 and chapter 10, pages 110-114.

* **Adjustment tools** can be supplied individually or as a complete set in a tool bag (1253 714).

Optional accessories:

These tools are supplied on special request.

Adjustment tools*	Types Ref.no.	Symbol
Tool set with bag	1253 714	
Height gauge	1260 216	
Allen key SW 5	0993 551	
Draft field gauge	6000 884	
Allen key SW 4	0993 570	
Long screwdriver bit SW 6 for wrench 1/4"	1255 195	
Ratchet 1/4" (handle reversible)	0997 453	
Pliers for cover	1255 145	
Spanner size 8	1255 215	
Pliers for fitting of the connecting tube	1256 207	
Height setting gauge	6002 024	
Torque wrench with inserts (2 - 25 Nm)	6023 027	
Optional accessories:		
Tube cutter	6001 490	
Torque wrench w. inserts 3/8"-1/4" (5-50 Nm)	6004 461	

Ring spinning machines

Worsted mills

SPARE PARTS WEIGHTING ARM PK 6000



Spare parts	Types Ref.no.	Symbol
Connecting pipe Tw 82.5	1255 109	
Connecting pipe Tw 75	1255 217	
Cover cap	1252 815	
End piece	1259 498	
Front weighting element	6007 041	
L-quick-connector	1257 477	
Middle weighting element	6007 062	
Mono clearer roller	1253 433	
Mono clearer roller holder	1252 848	
Pneumatic spring	1252 906	
Pneumatic unit with air filter, automatic condensate separator and pressure monitor	1261 444	
Rear weighting element	6007 064	
T-joint	1259 647	

Top apron cradles

OH 6022: see chapter 6, pages 32-33

Top rollers

LP 1014: see chapter 3, page 5

LP 1015: see chapter 3, page 6

Cots & aprons

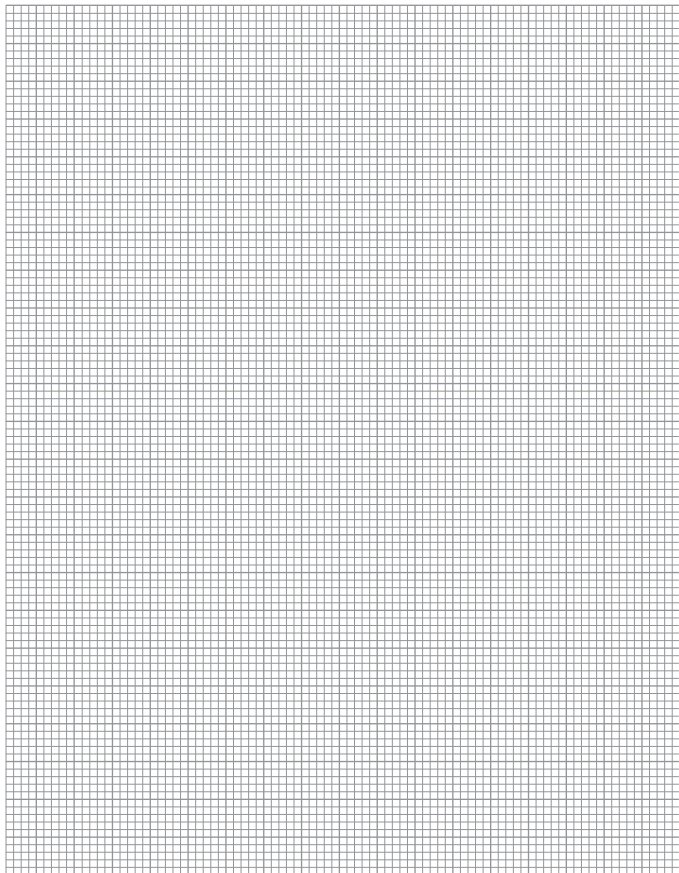
see chapter 3, pages 14-15 and chapter 6, pages 34-35

Distance clips OLC for top apron cradles*

OH 6022	OLC-0964 120 black	OLC-0004 587 beige	OLC-0004 588 green	OLC-0004 589 pink	OLC 0964 123 blue
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* For normal bottom apron nose bar

NOTES



**PRODUCTS
FOR RING SPINNING**

**Top Apron
Cradles**

Accotex Aprons

Distance Clips

Roving Guides

Condensers





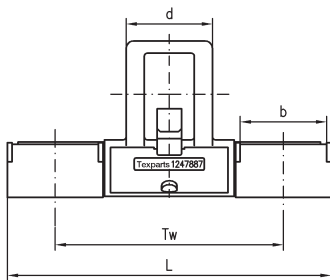
TOP APRON CRADLES OH 2022

Application

Short staple ring spinning drafting systems with Texparts weighting arms PK 3000 Series (82.5 mm gauge only), PK 2600 SE Series (82.5 mm gauge only), PK 2100 Series and PK 2000 Series.

Also designated as short OH

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	d
OH 2022-1247 888	68.4	99.8	28.4	28.4
OH 2022-1247 887	75	106.4	28.4	28.4
OH 2022-1247 889	82.5	113.9	28.4	28.4
OH 2022-1248 410	90	121.4	28.4	28.4



OH 2022

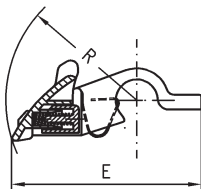
Ring spinning machines

Cotton mills

Chapter 6-2



			Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
	R	E				
	35	51.4	PR 28	OLC-0964 118 OLC-0017 705 OLC-0964 119	yellow lilac white	Cotton/man- made fibres/ blends up to 45 mm fibre length
	35	51.4	PR 28			
	35	51.4	PR 28			
	35	51.4	PR 28			



OH 2022

- 1) Top apron for apron top roller with 25 mm diameter.
Top aprons must be ordered as separate items.
- 2) Set of distance clips for OH 2022. Clips are not included in standard OH supply and have to be ordered separately.



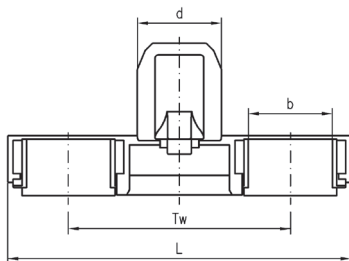
TOP APRON CRADLES OH 2122

Application

Short staple ring spinning drafting systems with Texparts weighting arms PK 2600 SE Series, PK 2630 SEH and PK 3000 Series.

Also designated as short OH

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	d
OH 2122-6020 689	70	111	28.4	28.4
OH 2122-6018 321	75	116	28.4	28.4



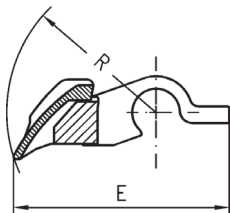
OH 2122

Ring spinning machines

Cotton mills



		Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
	R				
	35	51.4	PR 28	grey lilac white	Cotton/man- made fibres/ blends up to 45 mm fibre length
	35	51.4	PR 28		



OH 2122

- 1) Top apron for apron top roller with 25 mm diameter.
Top aprons must be ordered as separate items.
- 2) Set of distance clips for OH 2122. Clips are not included in standard OH supply and have to be ordered separately.



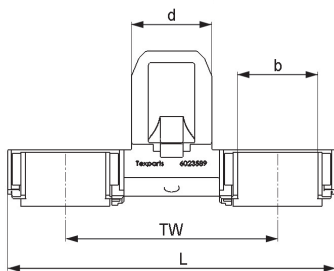
TOP APRON CRADLES OH 2132

Application

Short staple ring spinning drafting systems with Texparts weighting arms PK 2630 SE Series, PK 2630 SEH and PK 3000 Series.

Also designated as short-medium OH

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	d
OH 2132-6023 011	70	111	28.4	28.4
OH 2132-6023 589	75	116	28.4	28.4



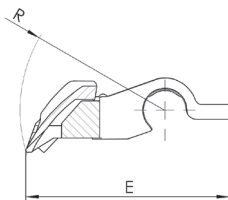
OH 2132

Ring spinning machines

Cotton mills



		Top aprons	Basic equipment Distance clips ³⁾ Ref.no.	Colour	Application
	R				
	39	55	PR 2839¹⁾	lilac white light green	Cotton/man-made fibres/ blends up to 45 mm fibre length
	39	55	PR 2841²⁾		



OH 2132

- 1) Top apron for apron top roller with 25 mm diameter.
Top aprons must be ordered as separate items.
- 2) Top apron for apron top roller with 27 mm diameter.
Top aprons must be ordered as separate items.
- 3) Set of distance clips for OH 2132. Clips are not included in standard OH supply and have to be ordered separately.



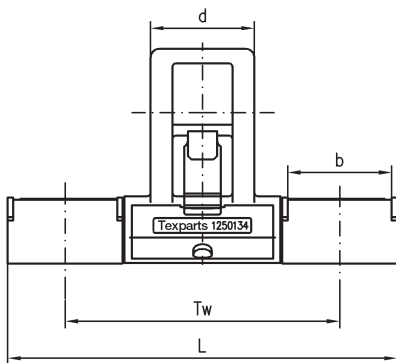
TOP APRON CRADLES OH 2042

Application

Short staple ring spinning drafting systems with Texparts weighting arms PK 2000 Series and PK 2100 Series.

Also designated as medium OH.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	d
OH 2042-1250 133	68.4	99.8	28.4	28.4
OH 2042-1250 134	75	106.4	28.4	28.4



OH 2042

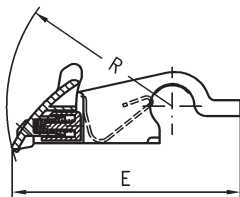
Ring spinning machines

Cotton mills

Chapter 6-8



		Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
R	E				
42.5	58.9	PR 2813	OLC-0964 117 OLC-0964 118 OLC-0964 119	red yellow white	Cotton/man-made fibres/blends up to 54 mm fibre length
42.5	58.9	PR 2813			



OH 2042

- 1) Top apron for apron top roller with 25 mm diameter.
Top aprons must be ordered as separate items.
- 2) Set of distance clips for OH 2042. Distance clips are not included in standard OH supply and have to be ordered separately.



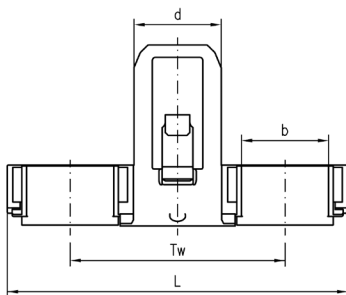
TOP APRON CRADLES OH 2142

Application

Short staple ring spinning drafting systems with Texparts weighting arms PK 2600 SE Series, PK 2630 SEH and PK 3000 Series.

Also designated as medium OH.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	d
OH 2142-6020 803	70	111	28.4	28.4
OH 2142-6022 727	75	116	28.4	28.4



OH 2142

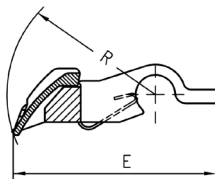
Ring spinning machines

Cotton mills

Chapter 6-10



		Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
	R				
	42.5	58.8	PR 2813	red yellow white	Cotton/man-made fibres/blends up to 54 mm fibre length
	42.5	58.8	PR 2813		



OH 2142

- ¹⁾ Top apron for apron top roller with 25 mm diameter.
Top aprons must be ordered as separate items.
- ²⁾ Set of distance clips for OH 2142. Distance clips are not included in standard OH supply and have to be ordered separately.



TOP APRON CRADLES OH 132

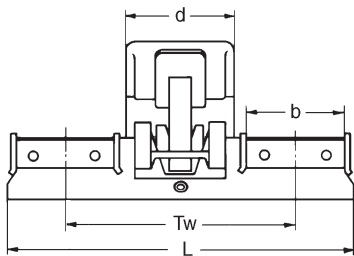
Application

Short staple ring spinning
drafting systems with
Texparts weighting arms

PK 2000 Series and
PK 2100 Series
(82.5 mm gauge only).

Also designated
as medium OH.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	d
OH 132-0963 671*	82.5	122	32.4	35



OH 132

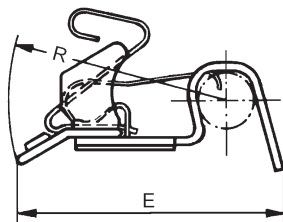
Ring spinning machines

Cotton mills

* Delivery until using-up of stock.



		Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application	
	R					E
	42.8	52.9	PR 323	OLC-0964 117 OLC-0964 118 OLC-0964 119	red yellow white	Cotton/man-made fibres/blends up to 54 mm fibre length



OH 132

- 1) Top apron for apron top roller with 25 mm diameter.
Top aprons must be ordered as separate items.
- 2) Set of distance clips for OH 132. Clips are not included in standard OH supply and have to be ordered separately.



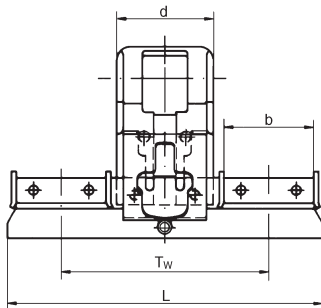
TOP APRON CRADLES OH 122

Application

Cotton ring spinning drafting systems with Texparts weighting arms PK 2600 SE Series, PK 2100 Series and PK 2000 Series.

Also designated as long OH.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	d
OH 122-0963 495	68.4	103	28.4	35
OH 122-0963 500	75	114	32.4	35
OH 122-0963 511	82.5	122	32.4	35



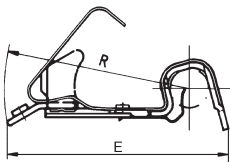
OH 122

Ring spinning machines

Cotton mills



		Top aprons ¹⁾		Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
	R	E				
	58.3	69	PR 028	OLC-0964 118 OLC-0964 119 OLC-0017 627	yellow white grey	Cotton/man-made fibres/blends up to 60 mm fibre length
	58.3	69	PR 032			
	58.3	69	PR 032			



OH 122

- ¹⁾ Top apron for apron top roller with 25 mm diameter.
Top aprons must be ordered as separate items.
- ²⁾ Set of distance clips for OH 122. Clips are not included in standard OH supply and have to be ordered separately.



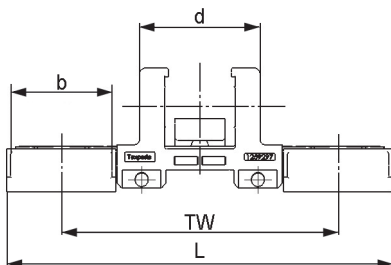
TOP APRON CRADLES OH 5022

Application

Cotton roving drafting systems with Texparts weighting arms PK 5000, PK 1550.

Also designated as short OH.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	c
OH 5022-6010 688	90	133.4	40.4	18.8
OH 5022-6004 092	100	143.4	40.4	18.8
OH 5022-1259 297	110	153.4	40.4	18.8



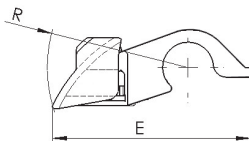
OH 5022

Roving frames

Cotton mills



				Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
d	R	E					
48	35	49.6	PR 40	OLC-0964 104 OLC-0964 106 OLC-0964 108	white black green	Cotton/man-made fibres/blends up to 45 mm fibre length	
48	35	49.6	PR 40				
48	35	49.6	PR 40				



OH 5022

- 1) Top apron for apron top roller with 25 mm diameter.
Top aprons must be ordered as separate items.
- 2) Set of distance clips for OH 5022. Clips are not included in standard OH supply and have to be ordered separately.
Two identical clips are needed per OH 5022.



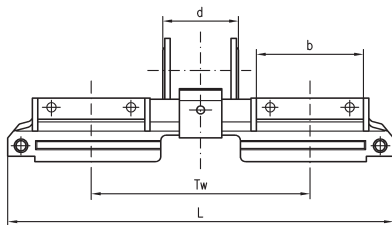
TOP APRON CRADLES OH 514

Application

Cotton roving drafting systems with Texparts weighting arms PK 1500

Also designated as short OH.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	c
OH 514-0962 745	100	163.0	40.4	18.5
OH 514-0962 746	110	173.0	40.4	18.5
OH 514-0962 747	130	193.0	40.4	18.5



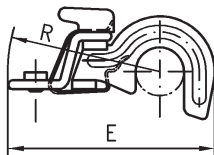
OH 514

Roving frames

Cotton mills



				Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
	d	R	E				
	28.6	34.5	47	PR 40	OLC-0964 104 OLC-0964 106 OLC-0964 108	white black green	Cotton/man-made fibres/blends up to 45 mm fibre length
	28.6	34.5	47	PR 40			
	28.6	34.5	47	PR 40			



OH 514

- 1) Top apron for apron top roller with 25 mm diameter.
Top aprons must be ordered as separate items.
- 2) Set of distance clips for OH 514. Clips are not included in standard OH supply and have to be ordered separately.
Two identical clips are needed per OH 514.



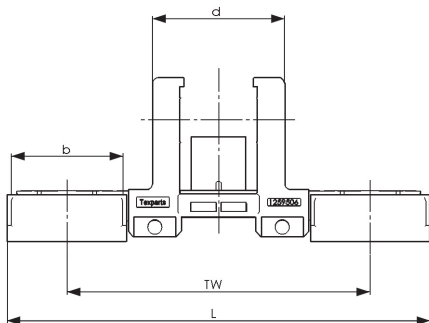
TOP APRON CRADLES OH 5042

Application

Cotton roving drafting systems with Texparts weighting arms PK 5000, PK 1550.

Also designated as medium OH.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	C
OH 5042-1259 506	110	153.4	40.4	19



OH 5042

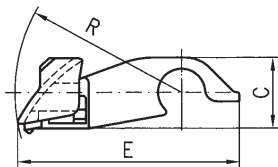
Roving frames

Cotton mills

Chapter 6-20



			Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
d	R	E				
48	45	59.6	PR 4010	OLC-0964 104 OLC-0964 106 OLC-0964 108	white black green	Cotton/man-made fibres/blends up to 54 mm fibre length



OH 5042

- 1) Top apron for apron top roller with 25 mm diameter.
Top aprons must be ordered as separate items.
- 2) Set of distance clips for OH 5042. Clips are not included in standard OH supply and have to be ordered separately.
Two identical clips are needed per OH 5042.



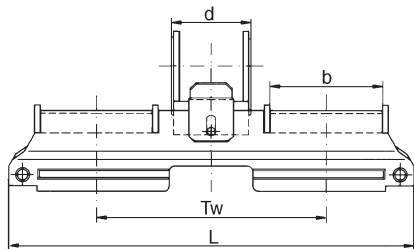
TOP APRON CRADLES OH 534

Application

Cotton roving drafting systems with Texparts weighting arms PK 1500.

Also designated as medium OH.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	c
OH 534-0962 765*	110	173.0	40.4	17.8



OH 534

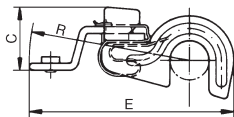
Roving frames

Cotton mills

* Delivery until using-up of stock.



			Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
d	R	E				
28.6	45	57.5	PR 40	OLC-0964 104 OLC-0964 106 OLC-0964 108	white black green	Cotton/man-made fibres/blends up to 54 mm fibre length



OH 534

- 1) Top apron for apron top roller with 25 mm diameter
For apron top roller with 33 mm diameter top apron PR 407 is applicable.
Top aprons must be ordered as separate items.
- 2) Set of distance clips for OH 534. Clips are not included in standard OH supply and have to be ordered separately.
Two identical clips are needed per OH 534.



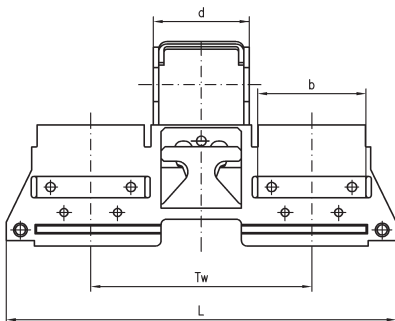
TOP APRON CRADLES OH 5245

Application

Cotton roving drafting systems with Texparts weighting arms PK 5000, PK 1550.

Also designated as long OH.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	c
OH 5245-1260 370*	110	173.0	40.4	16



OH 5245

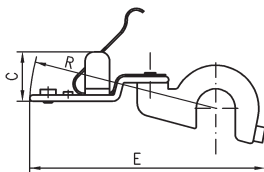
Roving frames

Cotton mills

* Delivery until using-up of stock.



			Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
d	R	E				
35.6	60.5	76	PR 4011	OLC-0964 104 OLC-0964 106 OLC-0964 108	white black green	Cotton/man-made fibres/ blends up to 60 mm fibre length



OH 5245

- 1) Top apron for apron top roller with 25 mm diameter. Top aprons must be ordered as separate items.
- 2) Set of distance clips for OH 5245. Clips are not included in standard OH supply and have to be ordered separately. Two identical clips are needed per OH 5245.



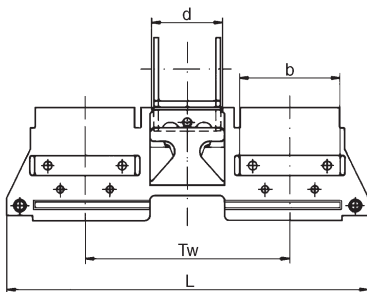
TOP APRON CRADLES OH 524

Application

Cotton roving drafting systems with Texparts weighting arms PK 1500.

Also designated as long OH.

Cradle Types Ref.no.	Dimensions in mm				
	Tw	L	b	c	
OH 524-0962 753*	82.5	145.5	40.4	16	
OH 524-0962 755*	110	173.0	40.4	16	



OH 524

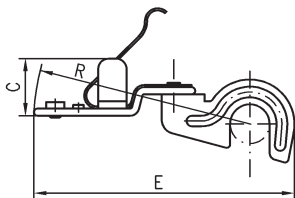
Roving frames

Cotton mills

* Delivery until using-up of stock.



				Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
	d	R	E				
	28.6	60.5	73	PR 4011	OLC-0964 104 OLC-0964 106 OLC-0964 108	white black green	Cotton/man-made fibres/blends up to 60 mm fibre length
	28.6	60.5	73	PR 4011			



OH 524

- ¹⁾ Top apron for apron top roller with 25 mm diameter.
For apron top roller with 33 mm diameter top apron PR 408 is applicable.
Top aprons must be ordered as separate items.
- ²⁾ Set of distance clips for OH 524. Clips are not included in standard OH supply and have to be ordered separately.
Two identical clips are needed per OH 524.

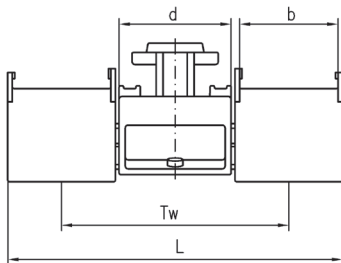


TOP APRON CRADLES OH 2402

Application

Worsted ring spinning
drafting systems with
Texparts weighting arms
PK 1660, PK 1601.

Cradle Types Ref.no.	Dimensions in mm				
	Tw	L	b	d	
OH 2402-1253 436	75	110.5	32.5	37	
OH 2402-1253 437	82.5	126.5	40.5	37	



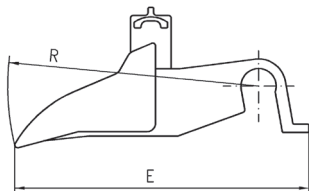
OH 2402

Ring spinning machines

Worsted mills



	R	E	Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
	94.5	110.3	PR 3217	OLC-0964 120 OLC-0004 587 OLC-0004 588	black beige green	Wool/man- made fibres/ blends up to 200 mm fibre length
	94.5	110.3	PR 4017			



OH 2402

- ¹⁾ Top apron roller with 48 mm diameter.
²⁾ Set of distance clips for OH 2402. Clips are not included in standard OH supply and have to be ordered separately.

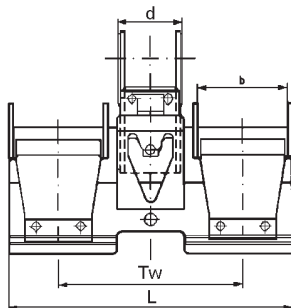


TOP APRON CRADLES OH 554

Application

Worsted ring spinning
drafting systems with
Texparts weighting arms
PK 1660, PK 1601.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	d
OH 554-0962 767*	75	111	32.4	28.6



OH 554

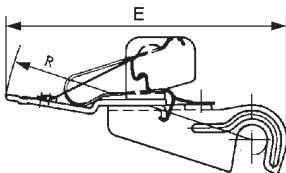
Ring spinning machines

Worsted mills

* Delivery until using-up of stock.



	R	E	Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
	89.5	101	PR 325	OLC-0964 120 OLC-0004 587 OLC-0004 588	black beige green	Wool/man-made fibres/ blends up to 200 mm fibre length



OH 554

- ¹⁾ Top apron for apron top roller with 48 mm diameter.
Top aprons must be ordered as separate items.
- ²⁾ Set of distance clips for OH 554. Clips are not included in standard OH supply and have to be ordered separately.

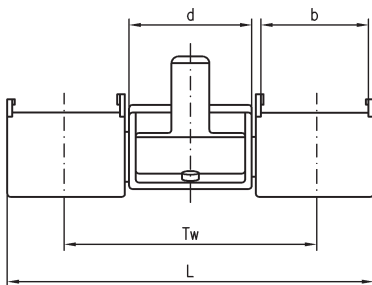


TOP APRON CRADLES OH 6022

Application

Worsted ring spinning
drafting systems with
Texparts weighting arms
PK 6000.

Cradle Types Ref.no.	Dimensions in mm			
	Tw	L	b	d
OH 6022-1254 311	75	110.5	32.4	37
OH 6022-1254 312	82.5	126	40.4	37



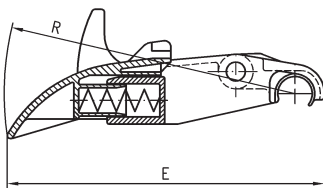
OH 6022

Ring spinning machines

Worsted mills



		Top aprons ¹⁾	Basic equipment Distance clips ²⁾ Ref.no.	Colour	Application
R	E				
88.8	98	PR 3216	OLC-0964 120 OLC-0004 587 OLC-0004 588	black beige green	All kinds of wool/man-made fibres/blends of both types up to 200 mm fibre length
88.8	98	PR 4016			




OH 6022

- ¹⁾ Top apron for apron top roller with 33 mm diameter.
Top aprons must be ordered as separate items.
- ²⁾ Set of distance clips for OH 6022. Clips are not included in standard OH supply and have to be ordered separately.




APRONS FOR SHORT STAPLE SPINNING



Accotex Aprons for Roving and Ring Spinning

Apron quality	Application	Fibres	Colour	
NO-78210G	Top and bottom apron High premium apron recommended for all applications	All Fibres	grey/ green	

Accotex Aprons for Twisting

Apron quality	Application	Fibres	Colour	
TW-450X	Twister Sleeve	All Fibres	grey/ grey	

Accotex Aprons for Airjet Spinning

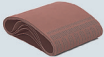
Apron quality	Application	Fibres	Colour	
NO-4970 KN	Top Apron Bottom Apron	Cotton, Blends, Man Made Fibres	grey/ green	
NO-9670 KN	Bottom Apron	PES, PES/CO Blends	black/ green	

Aprons available in endless and skived version.
Apron thickness 0.9, 1.0, 1.1, 1.2, 1.4, 1.65 mm.
Ring spinning aprons with knurled inside available with
72.5, 76.3 and 79.0 mm inside diameter.



APRONS FOR LONG STAPLE SPINNING




Accotex Aprons for Spinning Preparation

Apron quality	Application	Fibres	Colour	
972	Combing apron	Woolen Blends, Blends of Man Made Fibres and pure Man Made Fibres	red/red	

Accotex Finisseur Aprons

Apron quality	Application	Fibres	Colour	
NO-78210*X	Cordless top and bottom apron	Wool	grey/green	
NO-78210G	Top and bottom apron High premium apron reinforced, recommended for all applications	Wool	grey/green	

Accotex Aprons for Roving and Ring Spinning

Apron quality	Application	Fibres	Colour	
NO-78210G	Top and bottom apron. High premium apron recommended for all applications	Wool, Man Made Fibres, Blends	grey/green	



DISTANCE CLIPS OLC

Application

For top apron cradles
in drafting systems with
weighting arms
PK 3000 Series,
PK 2600 SE Series,
PK 2630 SEH,
PK 2100 Series and
PK 2000 Series.

For center-support.

Types Ref.no.	Colour	Symbol	
OLC-0964 117	Red		
OLC-6011 878	Chrome yellow		
OLC-0964 118	Yellow		
OLC-0017 705	Lilac		
OLC-0964 119	White		
OLC-6006 661	Light green		
OLC-0017 627	Grey		
OLC-6006 662	Turquoise		
OLC-0964 120	Black		
OLC-6006 663	Orange		
OLC-0004 587	Beige		
OLC-0004 588	Green		

Ring spinning machines

Cotton mills
Semi-worsted mills



Opening X in combination with Texparts top apron cradles ¹⁾								
	OH 2122	OH 2022	OH 2132	OH 2142	OH 62	OH 2042	OH 132	OH 122
	–	–	1.4	2.4	–	2.4*	2.5*	2.6
	–	1.9	1.8	2.6		2.6	2.9	3.0
	–	2.2*	2.1	2.8	2.2*	2.8*	3.3*	3.4
	2.5*	2.5*	2.4	3.2	2.5*	3.2	3.3	3.4
	2.8*	2.8*	2.8	3.5	2.9*	3.5*	3.6*	3.7*
	3.1	3.1	3.3	3.9	3.3	3.9	4.1	4.0
	3.3*	3.3	3.5	4.0	3.5	4.0	4.1	4.2*
	3.6	3.6	3.7	4.5	3.8	4.5	4.6	4.5
	3.8	3.8	3.9	4.6	3.9	4.6	4.6	4.7
	4.4	4.4			4.5	5.3	5.3	5.3
	4.8	4.8			5.2	6.0	5.7	5.7
	5.5	5.5			5.8	6.6	6.1	6.2

¹⁾ = See chapter 10-34

* = Set of distance clips. Not included in standard OH supply.



DISTANCE CLIPS OLC

Application

For top apron cradles in drafting systems with weighting arms PK 1600, PK 1500, PK 1550, PK 1580 and PK 5000 series.

2 pieces each needed per apron cradle.

Types Ref.no.	Colour	Symbol	
OLC-0964 102	Red		
OLC-0964 103	Yellow		
OLC-0964 104	White		
OLC-0964 105	Grey		
OLC-0964 106	Black		
OLC-0030 491	Orange		
OLC-0964 107	Beige		
OLC-0964 108	Green		
OLC-0964 109	Blue		
OLC-0964 110	Brown		

Roving frames

Cotton mills



	Opening X in combination with Texparts top apron cradles ¹⁾					OH 5245
	OH 5022	OH 514	OH 5042	OH 534	OH 524	
	3.4	3.5	3.5	3.6	3.6	3.6
	3.8	4.0	3.9	4.1	4.1	4.1
	4.4	4.6	4.4	4.6	4.6	4.6
	4.7	5.0	4.7	5.0	5.0	5.0
	5.1	5.4	5.1	5.4	5.4	5.4
	5.9	6.5	5.9	6.5	6.4	6.4
	8.9		8.9			
	11.1		11.1			

¹⁾ = See chapter 10-34



DISTANCE CLIPS OLC

Application

For top apron cradles in drafting systems with weighting arms PK 1601, PK 1660, PK 6000.
For center-support.

OLC-0007 685 to OLC-0007 688, used in short bottom apron systems with UH 54, for worsted drafting systems with weighting arms type PK 1601 and PK 1660.

Types Ref.no.	Colour	Symbol	
OLC-0964 120	black		
OLC-6006 663	orange		
OLC-0004 587	beige		
OLC-0004 588	green		
OLC-0004 589	pink		
OLC-0964 123	blue		
OLC-0007 685	black		
OLC-0007 686	beige		
OLC-0007 687	green		
OLC-0007 688	pink		

Ring spinning frames

Worsted mills



	Opening X in combination with Texparts top apron cradles ¹⁾		
	OH 2402	OH 554	OH 6022
	2.4	2.6	2.6
	3.0	3.4	3.2
	3.5	3.7	3.7
	4.0	4.1	4.1
	5.4	5.6	5.6
	7.5	8.0	8.0

¹⁾ = See chapter 10-34



ROVING GUIDES, CONDENSERS

Application

Ring spinning 3 roller double apron drafting systems.

Roving 3 roller double apron drafting systems.

Roving 4 roller double apron drafting systems.

Types Ref.no. ¹⁾	Roving guides/Condensers	
KL-0011 034	Rear roving guide	
KL-0998 282* KL-0998 283* KL-0998 284* KL-0998 285*	Front zone condenser	



Ring spinning machines
Roving frames

Cotton mills

Chapter 6-42

¹⁾ Products marked with * at Ref.no. are stamped with Texparts characters for designation.



	Used in drafting systems	Symbol	Remarks
	Short staple ring spinning machines for PK 2655 SE, PK 2665 SE, PK 2055, PK 2065, PK 2155, PK 2165		suited for profile 12 x 4 mm
	Roving frames PK 1500, PK 1550, PK 5000		6 - yellow 9 - uncoloured 12 - black 16 - green

²⁾ Colour mark indicates size.

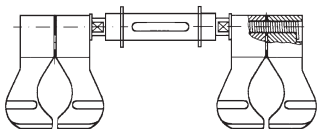


ROVING GUIDES, CONDENSERS

Application

Ring spinning 3 roller
double apron drafting
systems

Types Ref.no. ¹⁾	Gauge mm	Roving guides/ Condensers
KL-1246 243*	68.4 - 75	Front zone condenser; swinging legs are spring-suspended
KL-1246 070*	82.5	
KL-1246 244*	90 - 100	
KL-1248 233*	68.4 - 75	Front zone condenser, swinging legs are held by slotted cheese head screws
KL-1248 234*	82.5	
KL-1248 235*	90 - 100	



KL -1246 243
KL -1246 070
KL -1246 244



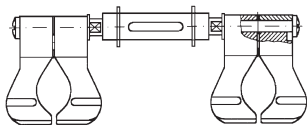
Spring PFE-0997 405

Ring spinning machines

Worsted mills



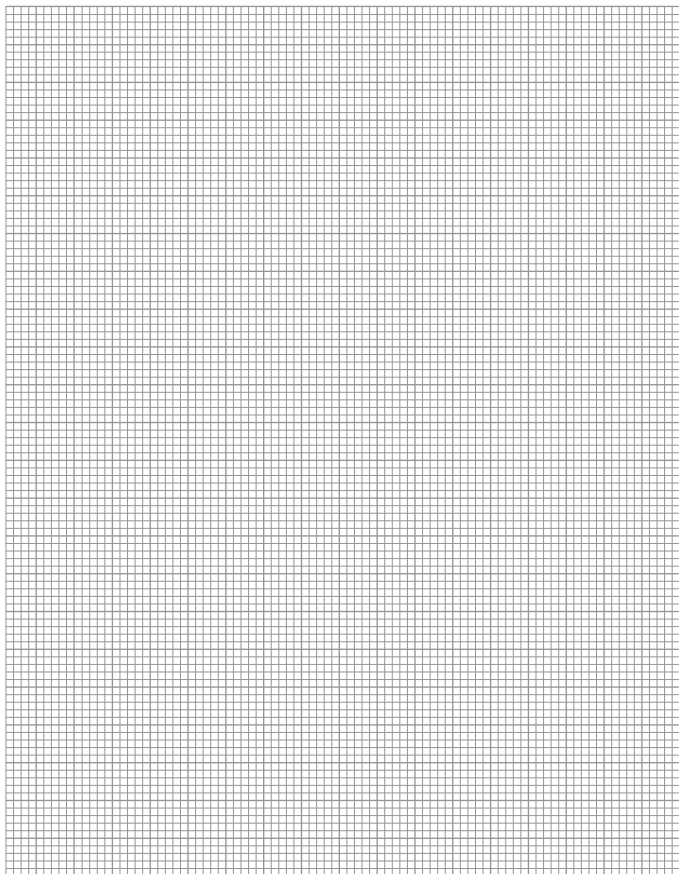
Used in drafting systems	Swinging leg Ref.no.
Worsted ring spinning machine PK 1601, PK1660 and PK 6000 series	1246 071 (swinging leg right hand) 1246 072 (swinging leg left hand)
	1246 071 (swinging leg right hand) 1246 072 (swinging leg left hand)



KL- 1248 233
KL -1248 234
KL -1248 235

- 1) Products marked with * at Ref.no. are stamped with Texparts characters for designation.
- 2) Retaining spring for all front zone condensers for PK 1600, PK 1700 series.

NOTES



PRODUCTS FOR
ROTOR SPINNING AND
FILAMENT PROCESSING

Rotor Bearings

Opening Rollers

Bearing Units¹⁾

¹⁾ Further products for
rotor spinning see chapter 2





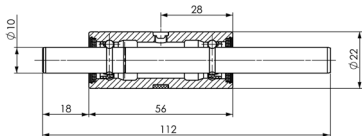
ROTOR BEARINGS TL

Application

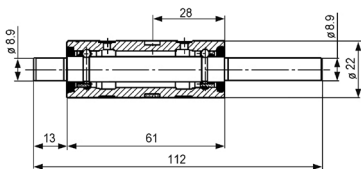
Rotor bearings TL 2260, TL 2280 and TL 2290 for rotor spinning machines of Saurer Series BD.

Rotor bearing Ref. no.	Speed n max. min ⁻¹ *
TL 2260-1262 761	60 000
TL 2280-1262 757	80 000
TL 2290-1264 377	95 000

* Rotor bearings for speeds over 95.000 min⁻¹ on request.
Resilient mounting for EB on request.



TL 2260-1262 761
TL 2280-1262 757



TL 2290-1264 377

Rotor spinning machines

Cotton mills

OPENING ROLLER LE



Opening roller
Ref. no.

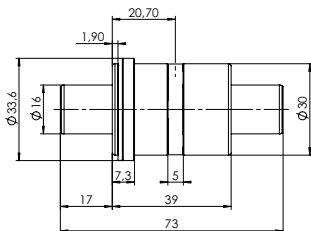
LE 1630-1258 643

Opening roller
with wharve
Ref. no.

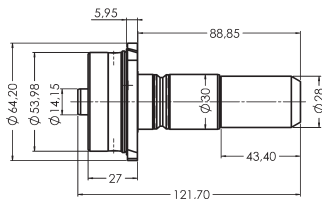
LE 222-1257 825

Suitable for
spin box type

SE 10/11



LE 1630-1258 643



LE 222-1257 825

Application

Opening roller LE 1630 for rotor spinning machines of Saurer Series BD.

Opening roller LE 222 for Saurer rotor spinning machines.

Rotor spinning machines

Cotton mills

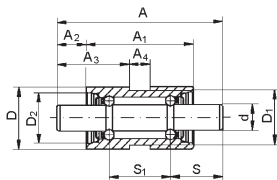


BEARING UNITS IL

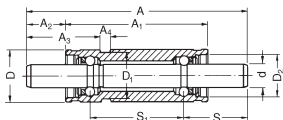
Application

Bearing units for support rolls in rotor spinning machines,

Types Ref.no.	Dimensions in mm				
	d	D	D ₁	D ₂	A
IL 13-1249 087	10	24	21	19.5	65
IL 13-0010 092	10	22	19	16	95
IL 13-0020 824	11	25	21	–	98
IL 13-0029 170	10	22.4	20.5	–	95
IL 13-1257 771	10	24	21	19.5	66



IL 13-1249 087



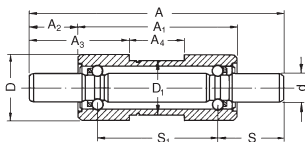
IL 13-0010 092

Rotor spinning machines

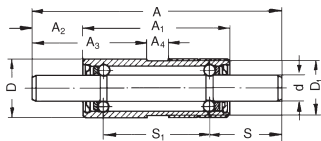
Cotton mills



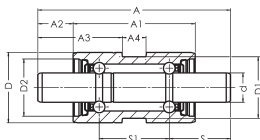
							Speed n max min ⁻¹	Load fig. in N per row dyn. C		Weight kg
A ₁	A ₂	A ₃	A ₄	S	S ₁	C		C ₀		
41.8	11.6	28.45	8.1	20.5	24	15000	2860	1160	0.160	
61	17	37.5	3.9	27.5	40	15000	2650	1060	0.150	
61	18.5	38.5	21	26	46	15000	2810	1080	0.180	
56	19.5	43.5	8	27.5	40	15000	2860	1160	0.150	
41.8	12.1	28.95	8.1	21	24	16000	2860	1160	0.110	



IL 13-0020 824



IL 13-0029 170



IL 13-1257 771



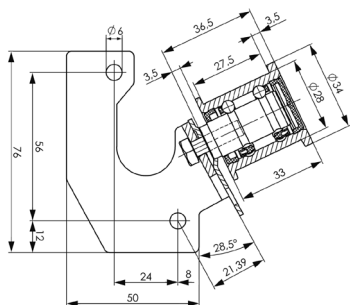
BEARING UNITS SR

Application

Belt guide roller for
Saurer rotor spinning
machines.

Types
Ref. no.

SR 28-1262 173



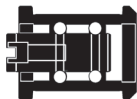
SR 28-1262 173

Rotor spinning machines

Cotton mills

Chapter 7-6

BEARING UNITS ZL



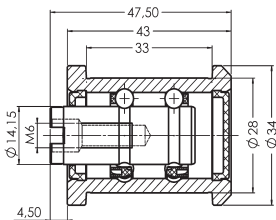
Types
Ref. no.

ZL 1828-1258 200

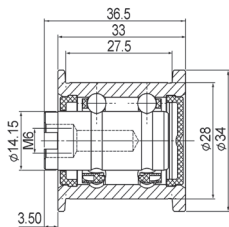
ZL 1828-1262 172

Application

Belt guide roller for
Saurer rotor spinning
machines.



ZL 1828-1258 200



ZL 1828-1262 172

Rotor spinning machines

Cotton mills

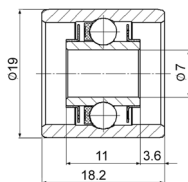


DRAW-OFF ROLLERS WITH COTS CK AND ZL

Application

Draw-off roller with cot for rotor spinning machines, winders and for general engineering application in textile machines.

Types Ref.no. ¹⁾	Cot ²⁾	Load rating in N		Weight kg	
		C	C ₀		
CK 12-1250 611	–	2550	680	0.020	
CK 12-0030 848	J-490 A	2550	680	0.028	
ZL 20-1263 762	890 A-L	5400	2360	0.050	
ZL 20-1263 763	121 A-L	5400	2360	0.050	
ZL 20-1263 394	890 A-L	5400	2360	0.050	
ZL 20-1263 395	121 A-L	5400	2360	0.050	



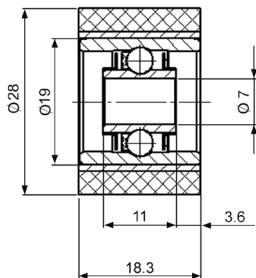
CK 12-1250 611

**Textile machinery
General engineering
applications**

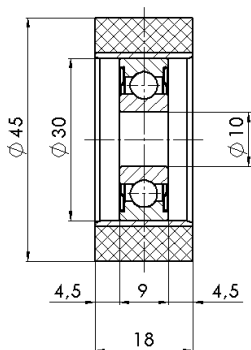
- ¹⁾ All ZL-bearings are equipped with basic bearings 6200-2Z/C3 with metal seal.
- ²⁾ Other cots available on request.



Remarks
basic bearing unit for CK 12-0030 848 and CK 12-1248 719
basic bearing CK 12-1250 611
Grease type: LTF 2
Grease type: LTF 2
Grease type: LTF 1
Grease type: LTF 1

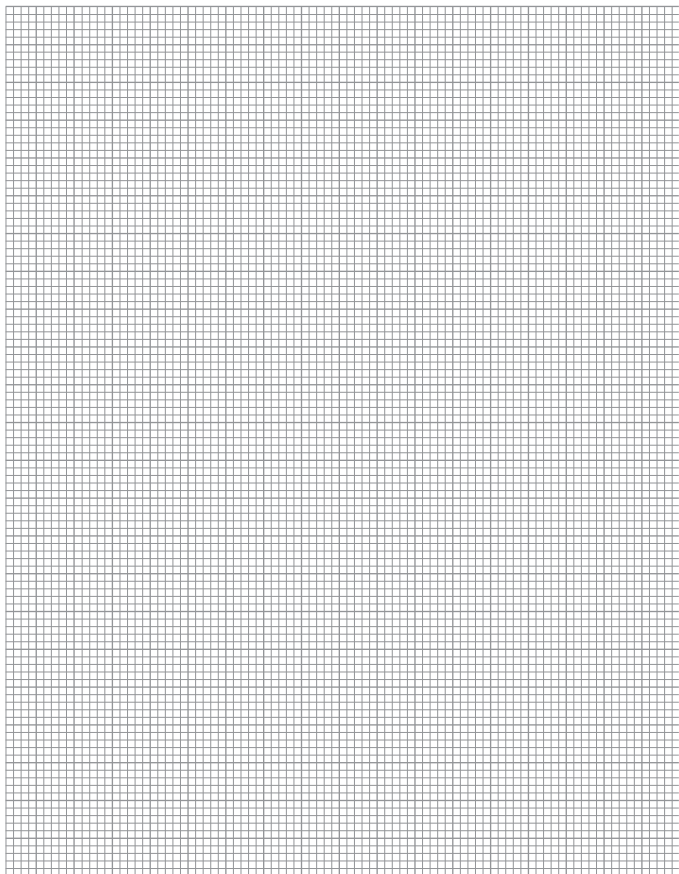


CK 12-0030 848



ZL 20-

NOTES



PRODUCTS FOR
FILAMENT PROCESSING

Separator Rolls

**Lubricating
Equipment**





SEPARATOR ROLLS VR

Application

Separator rolls for use in draw roll systems on draw twisters and draw winders.

Shell is non-detachable.

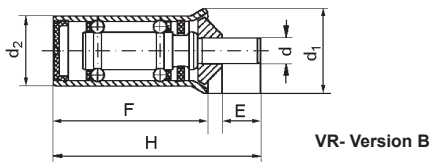
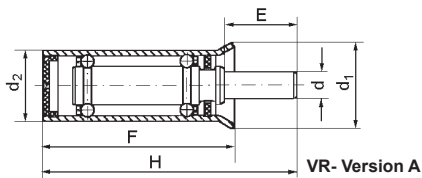
Lubricating and lubricating equipment for separator rolls see chapter 9 page 16.

Draw twisters
Draw winders

Filament processing mills

Chapter 8-2

Types Ref. no.	Version	°C on roll surface	Dimensions in mm		
			d_2	d_1	
VR 1- 0964 428	A	... 70	21.2	26	
VR 4- 0964 445	A	... 70	21.2	26	
VR 3- 0964 435	B	... 70	21.2	26	
VR 7- 0964 447	B	... 70	21.2	26	
VR 11-0964 434	B	... 70	21.2	26	
VR 2- 0964 430	C	... 70	21.2	26	
VR 6- 0964 442	C	... 70	21.2	26	
VR 8- 0964 426	D	... 70	21.2	-	
VR 3- 0025 015	A	... 70	21.2	26	
VR 3- 1264 099	A	... 70	21.2	26	
VR 4- 0964 438	A	70 ... 130	21.2	26	
VR 3- 0964 429	B	70 ... 130	21.2	26	
VR 7- 0964 441	B	70 ... 130	21.2	26	

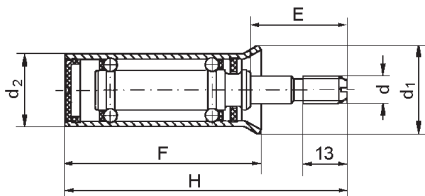




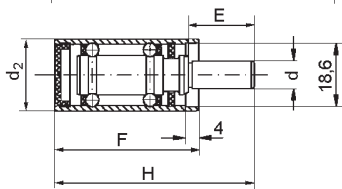
					Weight (kg)
	d	H	E	F	
	8	76.5	22	58	0.091
	8	95.8	22	77	0.123
	8	63	12	47	0.082
	8	76.5	14.5	58	0.100
	8	95.8	14.5	77	0.132
	M 8	83	28	58	0.092
	M 8	103	28.5	77	0.124
	8	59	19.5	43	0.070
	8	52.5	22	37	0.060
	8	50.5	16.3	37	0.059
	8	95.8	22	77	0.122
	8	63	12	47	0.082
	8	76.5	14.5	58	0.100

Remarks

1) Threads run on a hard-chrome plated outside surface; „orange-peel“ effect of surface provides optimum conditions of friction.



VR- Version C



VR- Version D

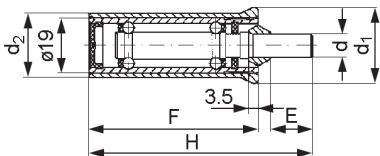


SEPARATOR ROLLS VR

Application

Separator roll for use in draw roll systems on draw twisters and draw winders.

Types Ref. no.	°C on roll surface	Dimensions in mm		
		d ₂	d ₁	
VR 7-0000 320 ¹⁾	... 70	22	26	



Separator roll VR 7-0000 320

Shell is detachable.

Draw twisters
Draw winders

Filament processing mills

¹⁾ The plastic cover with reference number VDE 0000 887 must be used for the VR 7-0000 320.



					Weight (kg)	Remarks
	d	H	E	F		
	8	76.5	14.5	58	0.124	Complete separator roll



TEXPARTS LUBRICATING EQUIPMENT AND ACCESSORIES FOR SEPARATOR ROLLS VR

Application

For lubricating separator rolls VR.

For information on lubricating intervals and lubricants see chapter 9 page 16.

Item	Types Ref. no.	For VR types
Lubricating device	1251 491	for all VR- types
Plastic cover ¹⁾ (ivory)	VDE-0911 030	VR 1 to VR 11 for temperatures up to 70° C on roll surface
Plastic cover ¹⁾ (red)	VDE-0002 607	VR 3, VR 4 and VR 7 for temperatures between 70° and 100° or 130° C resp.

Draw twisters
Draw winders

Filament processing mills

¹⁾ for spare orders.

RECOMMENDATIONS
AND PRACTICAL
INFORMATION

**Lubrication
and Servicing**

**Testing and
Measuring**

**Bearing Units for
Textile Machines**



LUBRICATION OF PRODUCTS FOR TEXTILE MACHINES

Types	Lubri- cant	Quantity of Lubricant g/bearing		Speed max. rpm.	Lubrication intervals Operating hrs. h
		min.	max.		
Tape tension pulleys SR					
SR 23-0954 031	A/B	0.8	1.2	10.000	18.000
SR 23-0954 032	A/B	0.8	1.2	10.000	18.000
SR 28-0012 473	M	0.6	1.0	15.000	12.000
SR 28-0012 474	M	0.6	1.0	15.000	12.000
SR 3528-1264389	M	0.6	0.8	12.000	18.000
SR 3528-1264390	M	0.6	0.8	12.000	18.000
SR 5047-1255 699	M	0.7	0.9	10.000	24.000
Contact roll assemblies AR for ring frames with tangential belt drive					
AR 28	A/B	0.6	1.0	> 15.000 15.000 12.000	6.000 9.000 12.000
AR 45	A/B	1.2	1.4	8.500 12.000	18.000 12.000
AR 5047	M	0.7	0.9	10.000	24.000
AR 3528	M	0.6	0.8	12.000	18.000
AR for ring frames with sectional drive or belt width up to 16 mm max.					
AR 50-0027 195	A/B	1.2	1.4	8.500 12.000	18.000 12.000
AR 50-0027 196	A/B	1.2	1.4	8.500 12.000	18.000 12.000
AR 50-1246 555	A/B	0.8	1.2	12.000	12.000
AR 5024	M	0.7	0.9	10.000	24.000

Types	Lubri- cant	Quantity of Lubricant g/bearing		Speed max. rpm.	Lubrication intervals Operating hrs. h
		min.	max.		
Bearing units					
SR 23-0008 620	A/B	0.8	1.2	20.000	18.000
SR 23-0020 650	A/B	0.8	1.2	20.000	18.000
SR 23-0954 030	A/B	0.8	1.2	20.000	18.000
SR 23 - with black cap	A/B	cap ¹⁾ full lubrication		20.000	6.000
SR 24 - with black cap	A/B	cap ¹⁾ full lubrication		20.000	6.000
SR 35 - with black cap	A/B	cap ¹⁾ full lubrication		20.000	6.000
FR-	A/B	0.8	1.2	15.000	18.000
ZB 7	A/B	0.8	1.2	8.000	18.000
ZL 7	A/B	0.8	1.2	8.000	18.000
ZL 17	A/B	0.5	–	8.000	6.000
DR-	A/B	0.6	1.0	8.000	12.000
DR 1922-0958 651	A/B	0.8	1.2	8.000	12.000

¹⁾ Lubrication interval: every 6.000 operating hrs. 4 to 5 rotations at the cap.

Lubricant

- A** **Texparts grease TG 2** - available in containers of 5 kg - Ref. No. **0026 877**
- B** **A high grade lithium base rolling bearing grease** having the following properties: Worked penetration: ~265 to 295 mm/10 at 25 °C, Dropping point: ~190 °C; Worked temperature range: -30 °C to +120 °C
- C** **Texparts grease TG 5** - available in containers of 5 kg - Ref. No. **0026 878**
- D** **A (Ba- or Ca-) complex soap grease** having the following properties: Worked penetration: ~220 to 300 mm/10 at 25 °C; Dropping point: > 200° C; Worked temperature range: ~ -30 °C to 150 °C
- M** **Asonic GHY 72** produced by Klüber Lubrication München KG, Geisenhausener Strasse 7 · 81379 München

LUBRICATION OF TOP AND BOTTOM ROLLER BEARINGS

Top roller bearings for ring spinning machines and roving frames

Types	Lubri- cant	Quantity of Lubricant g/bearing	Speed max. rpm.	Lubrication intervals Operating time h
Top rollers LP				
LP 1200 Series	Lifetime lubricated, maintenance free			
LP 1002	C/D	full lubrication	< 500	50.000
LP 302	C/D	full lubrication	< 500	30.000
LP 1016, LP 1017	C/D	full lubrication	< 500	30.000
LP 1014, LP 1015	C/D	full lubrication	< 500	30.000
LP 1003, LP 303	Lifetime lubricated, maintenance free			
Bottom roller bearings UL				
UL	C/D	full lubrication	< 500	3.000

Lubricant

C Texparts grease TG 5 - available in containers of 5 kg - Ref. No. **0026 878**

D Barium- or Calcium- complex soap grease having the following properties:
Worked penetration: ~220 to 300 mm/10 at 25 °C;
Dropping point: > 200 °C; Worked temperature range: ~ -30 °C to 150 °C

Top roller bearings Lubricating equipment and accessories

For top roller types

LP 302

LP 1002

LP 1014, LP 1015

LP 1016, LP 1017

Grease gun (without nozzle)		Types Ref. no.	Application
Size 2	Contents 120 cm ³	0993 073	For lubricating small numbers of top rollers
Size 3	Contents 400*/500 cm ³	0993 091	For 400 cm ³ cartridge (DIN1284) or loose filling

Nozzle	Types Ref. no.	Application
(to be screwed on grease gun)	0968 903	As regards lubrication of bottom roller bearings see chapter 9 page 15.

For lubrication of top rollers from Texparts, the nozzle 0968 903, which must be ordered separately, has to be screwed on the grease gun.



0968 903

LUBRICATION OF SPINDLE BEARING UNITS

Types	Lubri- cant	Operation	Lubrication intervals Operating hrs. h	Viscosity class to ISO
CS 1, CS 1S	G	with ring and traveller spindle speed up to 18.000 min ⁻¹	20.000	VG 10
CS 21 12	G			VG 46 ¹⁾
CS 1 12	G			VG 46 ¹⁾
HF 1	G	spindle speed exceeding 18.000 min ⁻¹	12.000	VG 10
HF 21	G			VG 10
HF 3	G	with ring and traveller	15.000	VG 10
HF 3 ²⁾	G	with suppressed balloon	10.000	VG 68
HF 44	G	with ring and traveller	15.000	VG 10
HZ 440	G	without ring and traveller	10.000	VG 10
HF 44 ²⁾	G	with suppressed balloon	10.000	VG 68

The oil level should be checked on a random sample of spindles after half the number of operating hours mentioned.

The roller bearing should be thoroughly coated with oil before putting the spindle into service, and also at each relubrication operation!

¹⁾ ISO VG 46 for all yarn counts (for finer yarn counts – higher than Nm 24 – ISO VG 10 can also be used)

²⁾ Special execution of damping spiral

Lubricant

G Solvent refined high-grade oil - with good anti-wear properties and containing anti-oxidant and anti-corrosion additives as per DIN 51517 - CLP or DIN 51524 - HLP.

Types	Lubri- cant	Lubrication interval after operating hrs. For axial load A ¹⁾		Viscosity class to ISO
		<3,5 daN h	>3,5 daN h	
HZ 33	G	10.000	7.000	VG 10
HZ 35, HF 45	G	10.000	7.000	VG 22

Types	Lubri- cant	Lubrication interval after operating hrs. For axial load A ¹⁾				Viscosity class to ISO
		<3,5 daN h	3,5-5 daN h	5-8 daN h	>8 daN h	
HZ 55	G	10.000	–	–	–	VG 10
	G	–	7 000	–	–	VG 22
	G	–	–	5 000	–	VG 22
HZ 66, HZ 68	G	10.000	–	–	–	VG 10
	G	–	7 000	4 000	–	VG 22
	G	–	–	–	4 000 ²⁾	VG 46
HZ 77	G	10.000	–	–	–	VG 10
	G	–	7 000	4 000	–	VG 22
	G	–	–	–	4 000 ²⁾	VG 46

The oil level should be checked on a random sample of spindles after half the number of operating hours mentioned. The types HZ 33, HZ 35 and HF 45 are provided for application in double twist spindles.

With types HZ 55 to HZ 77, for spinning or twisting with suppressed yarn balloon (e.g. with spinner or twister head on the spindle) use oil with the viscosity class ISO VG 100.

The roller bearing should be thoroughly coated with oil before putting the spindle into service, and also at each relubrication.

¹⁾ Axial Load A = Weight of full bobbin plus spindle blade assembly.

²⁾ Carry out an initial oil change after spindles have been run in for 50 hours.

Lubricant

G Solvent refined high-grade oil - with good anti-wear properties and containing anti-oxidant and anti-corrosion additives as per DIN 51517 – CLP or DIN 51524 – HLP.

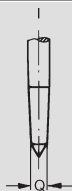
Viscosity Classes

Viscosity classes according to ISO	Mean kinematic viscosity at 40.0 °C mm ² /s (cSt)	Limits of kinematic viscosity at 40,0 °C mm ² /s (cSt)	
		min.	max.
VG 10	10	9.0	11.0
VG 22	22	19.8	24.2
VG 46	46	41.4	50.6
VG 68	68	61.2	74.8
VG 100	100	90.0	110.0

Under the international SI system, kinematic viscosity is expressed in m²/s. The relationship between this unit and the figures given in Centistokes (cSt) is 10⁻⁶ m²/s = 1 mm²/s = 1 cSt. Thus, the mm²/s column in the table corresponds to the values Centistokes (cSt).

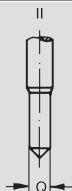
Identification of spindle bearing sizes and immersed depth of spindle

Spindle bearing unit sizes may be identified from the following dimensions:

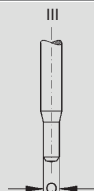


Conical foot shape (I) with blade tip

„P“ = blade diameter at roller bearing height
 „R“ = external diameter of spindle bearing head
 „Q“ = diameter of shaft foot



Cylindrical foot shape (II) with tapered blade



Cylindrical foot shape (III) with spherical tip

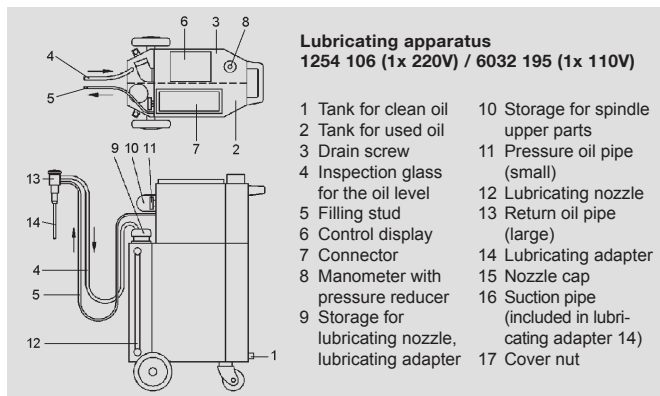
Spindle Type	Foot shape	P	R	Q	Oil filling Immersed depth of spindle blade in mm	
					max.	min.
CS 1, CS 1 S	III	6.8	16.0	4.5	65	45
CS 21 12	III	7.8	17.5	4.5	70	50
CS 1 12	III	6.8	16.0	4.5	70	50
HF 1	I	6.8	16.0	4.5	80	50
HF 21	I	7.8	17.5	4.5	80	50
HF 3	I	8.8	21.7	5.5	100	70
HZ 33	II	8.8	21.7	5.45	95	65
HZ 35	II	8.8	21.7	7.95	100	70
HF 44, HZ 440	II	10	23.8	6.45	110	70
HF 45	II	10	23.8	7.95	110	70
HZ 55	II	12	28.2	7.95	125	90
HZ 66	II	14	32.5	8.95	145	90
HZ 68	II	14	32.5	10.95	145	90
HZ 77	II	16	37.8	10.95	190	120

Electrical Lubricating apparatus 1254 106 / 6032 195 for Lubrication of Texparts Spindle Bearing Units

The lubricating apparatus **1254 106** (1x 220V) respectively **6032 195** (1x 110V) is conceived for the original lubrication and the maintenance of Texparts spindle bearing units CS, HF and HZ. It is suitable for all spindle sizes. The lubricating pump is activated by an electric motor drive system. The spindle lubricating apparatus supplies clean oil and simultaneously displaces the waste oil.

The oil pump supplies clean oil to the spindle bearing via the lubricating nozzle (12) and the lubricating adapter (14) with suction pipe (16). The incoming clean oil humidifies the roller bearings. The clean oil forces the waste oil through the windings of the damping spring, the foot bearing and then out of the bearing unit through the lubricating pipe. The oil volume is fully replaced and the bearing carefully rinsed at the same time. The specific design of lubricating adapters ensures that the correct oil level is automatically achieved inside the bearing unit. Additional finetuning of the oil level can be achieved by adjustment of the lubricating pressure.

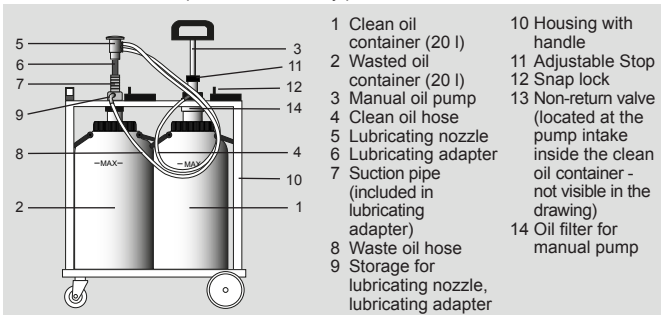
The lubricating time adjusted influences the rinsing effect. Extended lubricating time increases the rinsing effect, shorter lubricating time decreases it. When you pull the lubricating adapter from the spindle bearing unit, the channels for clean and fresh oil in the lubricating nozzle automatically lock, preventing oil from spilling out or returning to the pump. Overfilling of bearings or contamination of drive belts, belt channels or spindle rail is thereby prevented.



Manual Lubricating Apparatus 6018 613 for Lubrication of Texparts Spindle Bearing Units

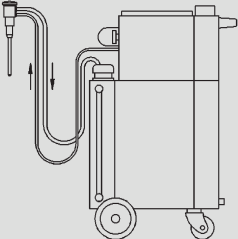
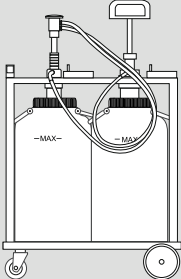
The spindle lubricating apparatus **6018 613** is a lubricating device with a manual pump for the lubrication and maintenance of Texparts spindle bearing units CS, HF, HZ and SF. Corresponding lubricating adapters are available for all types of Texparts spindle bearing units CS, HF, HZ and SF. For lubricating spindle bearing units from other manufacturers please contact us. The spindle lubricating apparatus supplies clean oil and simultaneously displaces the waste oil.

The oil pump supplies clean oil to the spindle bearing via the lubricating nozzle (5) and the lubricating adapter (6) with suction pipe (7). The incoming clean oil humidifies the roller bearings. The clean oil forces the waste oil through the windings of the damping element, the foot bearing and then out of the bearing unit through the lubricating pipe. The oil volume is fully replaced and the bearing carefully rinsed at the same time. Raising the pump handle draws fresh oil into the pump (3) and when the handle is depressed this fresh oil is pumped into the spindle bolster. **The pump handle must be operated with a smooth and steady movement. It should be lifted before removing the lubricating adapter from the spindle bearing unit.** The oil level of the bearing unit can be adjusted by fast actuation (higher oil level or slower actuation (lower oil level) of pump handle. The lubricating is finished when bubble free fresh oil (clear oil) appears in the transparent waste oil hose (8). If bubbles appear, repeat the lubrication, after refilling the clean oil container, until no more bubbles appear in the clean hose (4). The adjustable stop (11) allows to adjust the necessary pump stroke which is determined by trial. When you pull the lubricating adapter from the spindle bearing unit, the channels for clean and fresh oil in the lubricating nozzle automatically lock, preventing oil from spilling out or returning to the pump. Overfilling of bearings or contamination of drive belts, belt channels or spindle rail is thereby prevented.



Spindle Lubricating Apparatus

Technical Data

Ref. No. 1254 106 / Ref. No. 6032 195	Ref.No. 6018 613
Electrical lubricating apparatus with an electrically driven pump	Manual lubricating apparatus with a manual pump
Dimensions: Length: 450 mm Width: 380 mm Height: 720 mm Weight: 29 kg net	Dimensions: Length: 590 mm Width: 380 mm Height: 800 mm Weight: 18 kg net
	
Electric drive: The Texparts spindle lubricating apparatus is available for power supply 230V (Ref. No. 1254 106) and 110V (Ref. No. 6032 195). Please specify.	Volume of oil containers Clean and waste oil container: 20 l each Lubricating hydraulics Max. pressure: 10 bar (manual pump)

Note:

The standard supply of the spindle lubricating apparatus does not include any adapters. These have to be ordered as separate items. For Ref. No. of adapters see next page.

Lubrication Adapters and Accessories for Texparts Spindle Bearing Units CS, HF, HZ and SF

Adapter Ref.no.	Suitable for spindle types		Application
1253 181	CS 1 ^{1) 4)}	CS 1 S ^{1) 4)}	Lubrication adapters for lubricating apparatus 1254 106 and 6018 613 for servicing Texparts spindle bearing units CS, HF, HZ and SF.
6012 307	CS 1 ^{1) 5)}	CS 1 S ^{1) 5)}	
1253 182	CS 1 ²⁾	CS 1 S ²⁾	
6012 528	CS 1 ^{2) 5)}	CS 1 S ^{2) 5)}	
6021 712	CS 21 12 ¹⁾		
1256 450	CS 1 12 ¹⁾	CS 1 S 12 ¹⁾	
1256 451	CS 1 12 ²⁾	CS 1 S 12 ²⁾	
0019 983	↑ HF 1-0025 144 ¹⁾ ↓ SF 100	HZ 1 -1247 317 ¹⁾	
1260 233 ^{3) 4)} 6001 019 ^{3) 5)}	↑ HF 21-0013 802 ¹⁾ ↓ HF 21-1251 595 ²⁾	HF 21-1249 016 ¹⁾ SF 210	
0994 252	↑ HF 3-0952 502 ↓ HZ 30-1249 017	HF 3-0952 503	
0017 392	HZ 33-0019 871		
0021 818	HF 35-0018 300		
0998 112	↑ HF 44-0952 757 ↓ HF 45-0952 766	HF 44-0952 760 HZ 440-0029 250	
0998 111	HZ 55-0952 204		
0994 253	HZ 66-0014 227	HZ 68-0017 830	
0998 279	HZ 77-0952 381		

1) Standard version

2) Version with inner locking

3) Replacement for adapters 0994 250, 034 279 and 0992 952

4) Long version

5) Short version

LUBRICATION OF TEXPARTS ROTOR BEARINGS

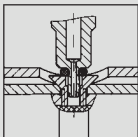
Types Rotor bearing TL	Lu- bri- cant	Lubrication intervals in operating hrs. h at rpm.		Quantity of Lubri- cant
		60.000	80.000	

Oil-lubricated rotor bearing:

TL 226-1245 856 ¹⁾	L	2.000	1.500	0.25 cm ³
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¹⁾ Combine relubrication with cleaning of by-pass filter. The by-pass filter (filter cover) covers the opening above the relubricating bore of the rotor bearing housing.

TL 226



Shape of lubricating hole

Lubricant L:

Oil Isoflex PDP 65

produced by: Klüber Lubrication
München KG · Geisenhausener Strasse 7
81379 München

TL 2290
TL 2260
TL 2280

Lubrication according to the specification of the machine manufacturers.

LUBRICATION OF TEXPARTS BOTTOM ROLLER BEARINGS, CONTACT ROLL ASSEMBLIES AND TENSION PULLEYS

Lubricating equipment and Accessories
for Bottom Roller Bearings UL, Contact Roll Assemblies AR
and Tension Pulleys SR

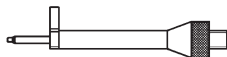
Application	Item	Types Ref. no.	Nozzle Ref. no.
For lubricating all types of Texparts bottom roller bearings, for lubricating contact roll assemblies and tension pulleys.	Grease guns Size 2 Contents 120 cm ³ Size 3 Contents 400*/500 cm ³	0993 073 0993 091	-
	For bottom roller bearing UL with Texparts standard lubricating nozzle UL with funnel lubricating nozzle		0993 040 0026 714
	For contact roll assemblies AR 28 AR 28 AR 45 AR 3528 AR 5047 AR 50 AR 5024		0993 040¹⁾ 1253 413²⁾ 0017 198²⁾ 0017 198²⁾ 0017 198²⁾ 0017 199²⁾ 0017 199²⁾
All nozzles mentioned are not included in the standard supply of the grease guns and have to be ordered as separate items.	For tension pulleys SR 7 SR 9 SR 23 SR 28 SR 3528* SR 5047		0026 714 0026 714 0993 040 0993 040 0017 198²⁾ 0017 198²⁾



0993 040



0026 714



0017 198

0017 199

¹⁾ Lubrication from top

²⁾ Lubrication from front

* for 400 cm³ cartridge (DIN 1284)

or loose filling (500 cm³)

LUBRICATION OF TEXPARTS SEPARATOR ROLLS VR

Types VR	Lubricant	Speed min ⁻¹	Lubrication intervals Operating hrs. h	°C on outside of shells ¹⁾ of VR/CK
Separator rolls VR and bearing unit CK 12 for temperatures up to 70° C				
VR 1- 0964 428, VR 2- 0964 430	H ↑ ↓	up to 10.000	12.000	up to 70°
VR 3- 0964 435, VR 3- 1264 099		up to 15.000	10.000	up to 70°
VR 4- 0964 445, VR 6- 0964 442		up to 20.000	7.000	up to 70°
VR 7- 0000 320 ²⁾ , VR 7- 0964 447		up to 25.000	5.000	up to 70°
VR 8- 0964 426, VR11-0964 434		up to 30.000	4.000	up to 70°

Separator rolls VR for temperatures between 70 to 130° C				
VR 3-0964 429 ³⁾ , VR 4- 0964 438 ³⁾	J ↑ ↓	up to 15.000	2.000	70-100
VR 7-0964 441 ³⁾		up to 20.000	1.500	70-100
		up to 10.000	700	100-130
VR 50-0964 450	J ↑ ↓	up to 15.000	2 000	100-200 ⁴⁾
		up to 15.000	700	200-260 ⁵⁾

¹⁾ In the temperature range between 70° - 80°C on outside surface of the shell, the lubricating intervals have to be reduced to 2/3 of the indicated values.

²⁾ Speed range up to 20.000 min⁻¹

³⁾ These types are provided with a red plastic cap.

⁴⁾ Outer ring temperature <100° C.

⁵⁾ Outer ring temperature <130° C.

Lubricant

H Isoflex Super LDS 18 Dispersion 25 S - available in containers of 1l.

Attention! Inflammable, dangerous material class A II.
Please observe warning advice.

J Unisilkon TK 44 N0 - produced by: Klüber Lubrication
München KG; Geisenhausener Strasse 7 · 81379 München

RECOMMENDATIONS
AND PRACTICAL
INFORMATION

**Recommendations
for Optimized
Spinning with
Texparts Spindles
and Texparts
Drafting Equipment**



10

TEXPARTS SPINDLE BEARING UNITS FOR SPINNING AND TWISTING SPINDLES

Texparts supplies suitable spindle bearing units for a wide range of applications of modern spinning and twisting machines.

The high-performance CS spindle bearing units for cotton and worsted ring spinning machines meet all requirements for modern spindles due to an innovative, function-orientated new bearing principle. The Texparts HF/HZ spindle bearing units are known all over the world and proved under industrial conditions.

Advantages of Texparts Spindle Bearing Units

Outstanding Running Properties

All Texparts spindle bearing units are equipped with metal-elastic spring elements thus giving radial resilience to the bearing places. The top part of the spindle can rotate – together with the unbalanced bobbin – around the common axis through the centre of gravity, thus minimising bearing forces and spindle vibrations. In addition, the spring elements ensure that the top part of the spindle is always returned to the initial position centred on the spinning ring after being moved.

The damping system is optimized for specific applications and effectively suppresses spindle vibrations over the whole speed range.

The carefully matched spring and damping qualities of Texparts spindle bearings guarantee outstanding running properties in the spindles.

Top Spindle Speeds

Texparts offers two bearing principles for spinning and twisting spindles:

Single-elastic Spindle Bearings

In these bearing units, either the footstep bearing is kept radially movable by a metal spring (types Texparts CS 1, CS1 12, CS 21 12). Visco hydraulic damping forms an integral property of the spring system.

The single-elastic bearings are of robust design and set the standard for the majority of applications in spinning and twisting. They can be used in conjunction with high-quality upper parts and tubes as well as for high-speed applications.

Double-elastic Spindle Bearings

These bearings are additionally equipped with a second metal spring which affords radial resilience in the neck roller bearing (type Texparts CS 1 S). This second spring also has a damping function being free of wear.

The double-elastic spindle bearing units allow the spindle upper part to shift the centre of the gravity axis even more exactly towards the rotation axis, thus achieving a major reduction in bearing forces and noise level.

The double-elastic spindle bearing units therefore are the ideal choice mainly for the high and maximum speed range. Their mechanical design permits speeds far above the limit imposed by the ring/traveller system.

Quiet Running Behaviour

The high precision of the Texparts spindle bearings and the system-inherent low bearing forces ensure low-noise spindle operation over the full speed range.

A further advantage in this respect results from the double-elastic spindle bearing systems, which generate lower acoustic pressure levels thanks to their lower bearing forces, and furthermore greatly reduce the transmission of structure-related vibration to the machine. For this reason, the use of double-elastic spindle bearing units is recommended whenever the noise level and high spindle speed is a major criterion for the assessment of the machine.

Minimized Energy Requirement

The oil-lubricated neck bearing and footstep bearing of Texparts spindle bearings are precisely matched to the blade of the spindle upper part for good bearing performance, and ensure minimum bearing friction in all speed ranges. Furthermore, the low dynamic bearing forces mean that roller bearings and wharves can be made smaller, and in turn permit low belt speeds and tension roller speeds. This results in considerable energy saving of the machine.

Models CS 1 and CS1 S have specially been designed for high-speed ring spinning spindles. The small neck bearing diameter allows an extremely small wharve diameter of 18.5 mm connected with low energy consumption.

High Centering Precision

The centering of the spindle inside the ring is a crucial factor for minimizing breakage rates and maximizing cop filling.

Here Texparts spindle bearing units offer ideal conditions:

- the spring elements of the spindle bearing counteract every movement of the spindle upper part with sufficient high resetting forces to restore it quickly to its initial centered position
- the flange underside and the centering collar of the spindle bearings are made with high precision and are fully aligned with the axis of the upper part.

Long-life

Minimized bearing forces plus high manufacture precision of the Texparts spindle bearing units are the basis for long-life. The robust designed elements of the spindle bearings also ensure the bearings to withstand occurring stresses such as during deceleration and doffing.

Damping oil inside the spindle bearing serves for permanent lubrication with extremely long maintenance intervals.

APPLICATIONS FOR TEXPARTS SPINDLE BEARING UNITS

Spindle Bearing Types

- **CS 1** (See chapter 1, page 4)

Used in light cotton and worsted spindles with tube lengths of up to 260 mm and speeds of up to 25.000 rpm.

- **CS1 12** (See chapter 1, page 6)

Used in cotton and worsted spindles for the manufacture of coarse yarns (e.g. denim yarns) as well as for spinning with suppressed yarn balloon and for spinning with big tube sizes up to 280 mm length.

- **CS21 12** (See chapter 1, page 7)

Used in cotton and worsted spindles for the manufacture of coarse yarns (e.g. denim yarns) as well as for spinning with suppressed yarn balloon and for spinning with big tube sizes up to 280 mm length.

The CS21 12 is designed for spindle upper parts with shaft diameter 7.8 mm thus resulting in a larger neck bearing diameter. The increased dimension for shaft and neck bearing – bearing distance B of 120 mm – withstands higher loads and therefore qualifies the CS21 12 for spinning with larger tubes.

- **CS 1 S** (See chapter 1, page 5)

Used in cotton spindles with maximum speeds of up to 30.000 rpm, or for spindles subject to special noise requirements.

The applications given above are rough guideline values. When selecting the right spindle bearing model, the Texparts technical specifications must be taken as the basis.

TUBES AND BOBBINS

The service-life of spinning and twisting spindles is mainly affected by unbalances of the rotating spindle elements (upper part and tube) or of the bobbin yarn package. Major unbalances cause high reaction forces in the spindle bearings. These forces increase disproportionately with raised spindle speed with unexpected wear of the bearings and spindle failure in particular unfavourable conditions.

Moreover, such major unbalances lead to spindle vibrations with detrimental effects on yarn quality and ends down rates, thus raising energy consumption and noise emission. Today spindle upper parts are generally produced at best quality, i.e. with extremely low out-of-true properties and suitable resistance to deformation whereas in many cases only less attention is given to the quality of tubes and bobbins.

So for example tubes often show too much clearance or inaccuracies in shape or they are made of poor material respectively.

For these reasons and because of the applied top speed ranges high tube quality is a basic requirement. The following aspects should be taken into account here:

Tube Clearance

The clearance between tube and spindle upper part has to be kept as small as possible. However, the fact that the tube can easily be fitted and removed again and that contraction through yarn winding does not cause the tube to stick to the upper spindle part has to be reminded.

The following technical measures have proved to be successful:

- Reduction of the tube/bobbin tolerances by improved manufacturing methods and use of high-quality materials
- Partial recesses in the upper part or in the tube/bobbin to provide more tolerance against deformation and contraction
- Use of dimensionally stable materials or metal fittings to avoid changes in tube diameter resulting from continued tube handling.

Tube Curvature and Wall Thickness Differences

It's a fact that tubes/bobbins with curvatures or large differences in wall thickness increase unbalance. Attempt should also be made to reduce the tolerances by means of high-quality manufacturing as well as the use of high-quality materials. A suitable tolerance recommendation for tapered tubes has been adopted in ISO 368 standard.

Tube Stiffness

Especially in the high-speed range tubes can be bent by dynamic forces connected with an increase in unbalances acting on the spindles. This is mainly true when the tube is supported over its full length by the upper part, or if the tube projects above the spindle blade at its upper end.

For this case it is strongly recommended to use dimensionally stable tubes made of high-strength materials.

Wear on Tubes and Bobbin Seats

At yarn breakage very often the spindle upper parts are not stopped by brakes but rather manually. The coupling buttons run into the tube material: the tubes run inadequately and the remaining inner contour of the tube and the spindle blade are then subject to wear. As it is generally well known this makes the replacement of the tube and of the whole spindle respectively necessary within a short time.

This problem can be minimized by using low-wear materials for tubes and bobbins or embedding low-wear rings; However, it is best to correctly use the brakes. For tubes and bobbins it is advised to use ring inserts resistant to wear driven by friction cones as this is the case with the so-called bare-blade spindles.

The reflections about tube quality presented above have been kept quite general. However, they are suitable to demonstrate the importance of tube/bobbin quality and interrelated factors.

Practical ideas which generally have to make also allowance to commercial considerations have to be matched to the respective application. Corresponding proposals are made by machine manufacturers and authorised spindle producers.

TEXPARTS RINGS AND TRAVELLERS

Rings and travellers are the dominant elements in the ring spinning process. The traveller accomplishes two main tasks while running on the ring at high speeds:

1. It provides the fibre band supplied by the feed rollers with the necessary twist
2. It assists in winding the yarn onto the bobbin in the form of a cop with the correct tension.

The key to reach high yarn quality is the reduction of the friction coefficient, that means the friction between yarn and traveller needs to be as low as possible.

At lowest friction possible you will get the perfect balanced spinning geometry that means the spinning tension is on a constantly ideal level.

The aspired ideal friction stands for:

- Higher traveller speed
- Extended rings and travellers life time
- Better yarn quality (reduction of hairiness)
- Lower working temperature
- Avoidance of yarn tension peaks
- Reduction of end breaks

Reduction of Friction

The reduction of friction will be achieved if the rings and travellers establish a symbiosis.

The ideal friction strikes the balance between:

- Traveller pitch angle to ring
- Traveller and ring geometry
- Ring positioning
- Traveller weight
- Traveller and ring coating

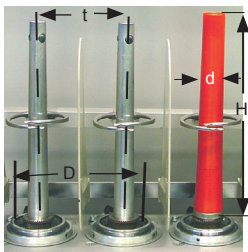
Spinning Geometry

The ability of the traveller to endure strain is influenced by several factors. Surveys regarding improvements of rings and travellers aimed at a further increase in performance should above all assure that all other conditions that are not directly connected with rings and travellers but have nevertheless a great influence on the spinning process are unobjectionable. Therefore ensure that:

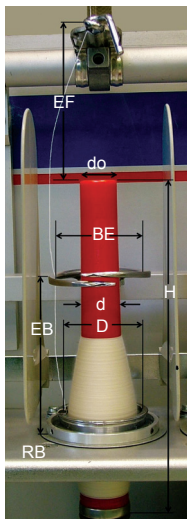
- The rings are perfectly centered with regard to the spindles
- The yarn-guide eyelet is well centered with regard to the spindle
- The balloon control rings are perfectly centered with regard to the spindles
- The spindle bearing is in good condition avoiding spindle vibrations
- The ratio between bobbin diameter, bobbin length and spindle gauge with regard to the ring diameter is correct
- Balloon control rings exist, their diameters match the ring

- Appropriate, correctly adjusted traveller cleaners keep the traveller free from fibre fly
- The room climate (temperature and relative air humidity) is favorable for the yarn processed
- The air in the mill is free from dust and fibre fly that influence the efficient performance of the traveller negatively

A smooth and well run-in ring track is a prerequisite by all means. In order to achieve good yarn qualities and low end breakage rates an exactly concentric and horizontal adjustment of the ring, the balloon control ring and the yarn-guide eyelet with regard to the spindle is required. This prevents one-sided ring wear, in particular if high spindle speeds are run. Also the ring rails or ring holders should therefore be installed in absolutely horizontal position compared to the vertically set up spindles.



H 5 x D
BE ~ D + 2 mm
EB ~ 2 x D
EF ~ 2 x do



Symbols:

- t** = spindle gauge
D = inside ring \varnothing d_1
d = mean bobbin \varnothing
do = top bobbin \varnothing
H = bobbin length
BE = balloon control ring
EB = setting distance ring/balloon control ring
FB = yarn balloon
RB = ring rail
EF = setting distance top of bobbin/yarn-guide eyelet (measures in mm)

Recommended Ratio Values:

- D =** t - 25 mm
d:D in spinning: 0.48 - 0.5 (not less than 0.42)
d:D in twisting: 0.44 - 0.5 (not less than 0.38)

d:D If the value d:D is **too small**, a high traveller strain occurs. Traveller wear and end breakages will increase. If the value d:D is **too large**, it will result in disturbances of the yarn balloon. The balloon may collapse temporarily, resulting in increased hairiness and end breakages.

H: If a too long bobbin or spindle is chosen (e.g. $H = 5.5 \times D$), the yarn balloon will contact the tip of the bobbin. Besides increased end breakages a worse yarn quality will be registered.

D and t: When choosing the ring \emptyset (D) the spindle gauge (t) has to be taken into consideration.

Spindle Gauge up to 85 mm

The ring diameter should be **25 mm** smaller at maximum with regard to the spindle gauge.

Spindle Gauge from 90 mm

The ring diameter should be chosen **30 mm** smaller at maximum with regard to the spindle gauge.

Only then traveller and yarn balloon will have the necessary freedom of movement. Inserting the traveller, repairing end breakages and exchanging the cop can in this case be done with fewer obstacles.

BE: The balloon control ring should be 2 - 3 mm larger than the ring diameter. If the balloon control ring is too wide, it will not fulfill its job of controlling the yarn balloon.

Spinning Geometry																
Traveller speed (in m/s)*	42															
	40															
	38															
	36															
	32															
	25															
Yarn Count (in Ne)	6	7	10	12	16	20	24	30	36	40	50	60	80	105	110	120
Ring diameter (in mm)	45/42															
	36/34															
	51/48															
	40/38															
Flange Type	Flange 1															
	Flange 1/2															
	Flange 2															

Table 1: Several parameters have a direct influence on the spinning geometry, defined as the spinning tension at constant balanced level. The table shows practical data on traveller speed, yarn count, ring diameter and flange type.

Performance of Rings and Travellers

In order to reduce the contact pressure the traveller shape has to be selected for the biggest contact area possible between traveller and ring. Furthermore the yarn should be guided as low as possible to ensure an optimal utilization of the single fiber sticking out of the yarn for the lubrication of the ring. Simultaneously the yarn guidance should be as high as possible to prevent yarn damage due to burning or yarn gets stuck between ring and traveller. Both of our traveller standard types CP1hf and CC1hf guarantee this in most of the applications.

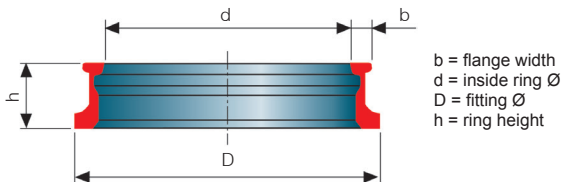
Traveller Cleaners

Traveller cleaners are an excellent means to remove all fiber fly that deposits on the outer part of travellers on flange rings. The traveller cleaner should have the correct distance to the outside ring flange. If it is not perfectly adjusted, fiber fly will deposit at the outer traveller bow. This results in an increased traveller weight and air resistance so that yarn tension and end breakages occur more often.

Room Climate

A constant temperature and air humidity have positive effects on the operation of the traveller. Variations in the atmospheric conditions within the room like higher air humidity will increase the friction wear and the lap formation through static charge.

Mach 1 Ring Series



Flange 1 ($b = 3.2 \text{ mm}$)

Ring dimensions (mm) $d \cdot D \cdot h$

36*47*8	32*51*10	35*54*10	48*57*10
38*47*8	35*51*10	36*54*10	38*60*10
36*48*9	36*51*10	36*54*8	42*60*10
38*48*9	38*51*8	38*54*10	45*60*10
40*48*9	38*51*9	38*54*8	48*60*10
41*48*9	38*51*10	40*54*8	51*60*10
42*48*9	40*51*8	40*54*9	
	40*51*9	40*54*10	
	40*51*10	41*54*9	
	41*51*9	42*54*8	
	42*51*8	42*54*9	
	42*51*9	42*54*10	
	42*51*10	45*54*9	
	45*51*9	45*54*10	

Flange 1/2 ($b = 2.6 \text{ mm}$)

Ring dimensions (mm) $d \cdot D \cdot h$

32*51*10	36*48*9	38*54*10	42*51*10
35*51*10	38*48*9	38*60*10	42*54*10
35*54*10	38*51*10	40*54*10	

Flange 2 ($b = 4.1 \text{ mm}$)

Ring dimensions (mm) $d \cdot D \cdot h$

42*54*10	45*54*10	51*60*10	
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Table 2: Ring types and dimensions

Spinning Recommendation for new Rings

After starting the ring spinning machine and having pieced all the yarn start at 80% of the final spindle speed. If necessary use traveller with slightly lower weight (1 or 2 numbers) than usual.

Traveller changes	Operating time	Spindle Speed
1st change before	1st doffing	80 %
2nd change before	2nd doffing	85 %
3rd change after about	12 operating hours	85 %
4th change after about	24 operating hours	90 %
5th change after about	36 operating hours	95 %
6th change after about	60 operating hours	100 %

Table 3: Ring running-in procedure

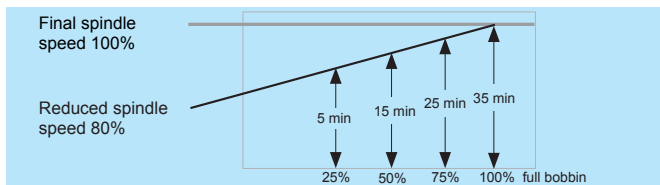
 Please note that sufficient fibre lubrication film has been built up!

Traveller Running-in after Traveller change

Saurer Components requires a traveller running in. If the running-in time is followed strictly, the new traveller will stand out due to

- Extended ring and traveller life time
- Increasing and stable yarn quality
- End breaks at standard level

Compared to conventional travellers the Texparts Traveller Coating enables reduced running-in time.



Traveller Numbers and Traveller Wear

The traveller wear is fundamentally influenced by the quality of the spinning preparation, the traveller speed and the ring condition. Heavy traveller wear will lead to increased ring straining, variations in winding and balloon tension and a smaller yarn clearance of the traveller. The traveller number (weight) should be adapted to the yarn count. Other influencing factors are spindle speed, delivery speed, balloon size and cop hardness. The balloon form has a considerable influence on the yarn quality. Imperfect balloon forms generate increasing yarn breaks as well as excessive traveller wear. Therefore the yarn balloon should have only slight contact with the balloon control ring. A too loose or too taut yarn balloon, which occurs with too light or too heavy traveller weight, must be avoided.

Ring Load Pressure Tables (C Serie Travellers)


Select traveller no. (weight) and inner ring diameter to get the ring load created by the traveller.

Formulae Ring load:
$$L = \frac{m \cdot v^2}{r}$$

L = Ring load in mN
 v = Traveller speed in m/s
 m = Traveller weight in mg
 r = Ring radius in mm (Ring-Ø/2)

Ring Ø 36 mm

Traveller no.	14/0	13/0	12/0	11/0	10/0	9/0	8/0	7/0
Traveller weight	18.3	20	21.6	23.2	25	26.8	28.5	30.2
m/s	Ring load							
24	586	640	691	742	800	858	912	966
25	635	694	750	806	868	931	990	1049
26	687	751	811	871	939	1006	1070	1134
27	741	810	875	940	1013	1085	1154	1223
28	797	871	941	1010	1089	1167	1241	1315
29	855	934	1009	1084	1168	1252	1332	1411
30	915	1000	1080	1160	1250	1340	1425	1510
31	977	1068	1153	1239	1335	1431	1522	1612
32	1041	1138	1229	1320	1422	1525	1621	1718
33	1107	1210	1307	1404	1513	1621	1724	1827
34	1175	1284	1387	1490	1606	1721	1830	1940
35	1245	1361	1470	1579	1701	1824	1940	2055
36	1318	1440	1555	1670	1800	1930	2052	2174
37	1392	1521	1643	1764	1901	2038	2168	2297
38	1468	1604	1733	1861	2006	2150	2286	2423
39	1546	1690	1825	1960	2113	2265	2408	2552
40	1627	1778	1920	2062	2222	2382	2533	2684
41	1709	1868	2017	2167	2335	2503	2662	2820
42	1793	1960	2117	2274	2450	2626	2793	2960
43	1880	2054	2219	2383	2568	2753	2928	3102
44	1968	2151	2323	2495	2689	2882	3065	3248
45	2059	2250	2430	2610	2813	3015	3206	3398
46	2151	2351	2539	2727	2939	3150	3350	3550
47	2246	2454	2651	2847	3068	3289	3498	3706
48	2342	2560	2765	2970	3200	3430	3648	3866
49	2441	2668	2881	3095	3335	3575	3802	4028
50	2542	2778	3000	3222	3472	3722	3958	4194

 Critical area: at too high load, increase of ring damages

6/0	5/0	4/0	3/0	2/0	1/0	1	2	3	4	5
32.2	35.1	38.3	42.2	48.3	54.6	62.2	73.6	81	87.7	95.3
1030	1123	1226	1350	1546	1747	1990	2355	2592	2806	3050
1118	1219	1330	1465	1677	1896	2160	2556	2813	3045	3309
1209	1318	1438	1585	1814	2051	2336	2764	3042	3294	3579
1304	1422	1551	1709	1956	2211	2519	2981	3281	3552	3860
1402	1529	1668	1838	2104	2378	2709	3206	3528	3820	4151
1504	1640	1789	1972	2257	2551	2906	3439	3785	4098	4453
1610	1755	1915	2110	2415	2730	3110	3680	4050	4385	4765
1719	1874	2045	2253	2579	2915	3321	3929	4325	4682	5088
1832	1997	2179	2401	2748	3106	3538	4187	4608	4989	5422
1948	2124	2317	2553	2922	3303	3763	4453	4901	5306	5766
2068	2254	2460	2710	3102	3507	3995	4727	5202	5632	6120
2191	2389	2607	2872	3287	3716	4233	5009	5513	5968	6486
2318	2527	2758	3038	3478	3931	4478	5299	5832	6314	6862
2449	2670	2913	3210	3673	4153	4731	5598	6161	6670	7248
2583	2816	3073	3385	3875	4380	4990	5904	6498	7035	7645
2721	2966	3236	3566	4081	4614	5256	6219	6845	7411	8053
2862	3120	3404	3751	4293	4853	5529	6542	7200	7796	8471
3007	3278	3577	3941	4511	5099	5809	6873	7565	8190	8900
3156	3440	3753	4136	4733	5351	6096	7213	7938	8595	9339
3308	3606	3934	4335	4961	5609	6389	7560	8321	9009	9789
3463	3775	4119	4539	5195	5873	6690	7916	8712	9433	10250
3623	3949	4309	4748	5434	6143	6998	8280	9113	9866	10721
3785	4126	4502	4961	5678	6419	7312	8652	9522	10310	11203
3952	4308	4700	5179	5927	6701	7633	9032	9941	10763	11695
4122	4493	4902	5402	6182	6989	7962	9421	10368	11226	12198
4295	4682	5109	5629	6443	7283	8297	9817	10805	11698	12712
4472	4875	5319	5861	6708	7583	8639	10222	11250	12181	13236

Ring Load Pressure Tables (C Serie Travellers)

Select traveller no. (weight) and inner ring diameter to get the ring load created by the traveller.

Formulae Ring load:
$$L = \frac{m \cdot v^2}{r}$$

L = Ring load in mN
 v = Traveller speed in m/s
 m = Traveller weight in mg
 r = Ring radius in mm (Ring-Ø/2)

Ring Ø 38 mm

Traveller no.	14/0	13/0	12/0	11/0	10/0	9/0	8/0	7/0
Traveller weight	18.3	20	21.6	23.2	25	26.8	28.5	30.2
m/s	Ring load							
24	555	606	655	703	758	812	864	916
25	602	658	711	763	822	882	938	993
26	651	712	769	825	889	954	1014	1074
27	702	767	829	890	959	1028	1094	1159
28	755	825	891	957	1032	1106	1176	1246
29	810	885	956	1027	1107	1186	1262	1337
30	867	947	1023	1099	1184	1269	1350	1431
31	926	1012	1093	1173	1264	1356	1442	1527
32	986	1078	1164	1250	1347	1444	1536	1628
33	1049	1146	1238	1330	1433	1536	1634	1731
34	1113	1217	1314	1412	1521	1631	1734	1837
35	1180	1289	1393	1496	1612	1728	1838	1947
36	1248	1364	1473	1582	1705	1828	1944	2060
37	1319	1441	1556	1672	1801	1931	2054	2176
38	1391	1520	1642	1763	1900	2037	2166	2295
39	1465	1601	1729	1857	2001	2145	2282	2418
40	1541	1684	1819	1954	2105	2257	2400	2543
41	1619	1769	1911	2053	2212	2371	2522	2672
42	1699	1857	2005	2154	2321	2488	2646	2804
43	1781	1946	2102	2258	2433	2608	2774	2939
44	1865	2038	2201	2364	2547	2731	2904	3077
45	1950	2132	2302	2473	2664	2856	3038	3219
46	2038	2227	2406	2584	2784	2985	3174	3363
47	2128	2325	2511	2697	2907	3116	3314	3511
48	2219	2425	2619	2813	3032	3250	3456	3662
49	2313	2527	2730	2932	3159	3387	3602	3816
50	2408	2632	2842	3053	3289	3526	3750	3974

■ Critical area: at too high load, increase of ring damages

6/0	5/0	4/0	3/0	2/0	1/0	1	2	3	4	5
32.2	35.1	38.3	42.2	48.3	54.6	62.2	73.6	81	87.7	95.3
976	1064	1161	1279	1464	1655	1886	2231	2456	2659	2889
1059	1155	1260	1388	1589	1796	2046	2421	2664	2885	3135
1146	1249	1363	1501	1718	1943	2213	2619	2882	3120	3391
1235	1347	1470	1619	1853	2095	2387	2824	3108	3365	3657
1329	1448	1580	1741	1993	2253	2567	3037	3342	3619	3932
1425	1554	1695	1868	2138	2417	2753	3258	3585	3882	4218
1525	1663	1814	1999	2288	2586	2946	3486	3837	4154	4514
1629	1775	1937	2134	2443	2762	3146	3723	4097	4436	4820
1735	1892	2064	2274	2603	2943	3352	3967	4365	4727	5136
1846	2012	2195	2419	2768	3129	3565	4218	4643	5027	5462
1959	2136	2330	2568	2939	3322	3784	4478	4928	5336	5798
2076	2263	2469	2721	3114	3520	4010	4745	5222	5654	6144
2196	2394	2612	2878	3295	3724	4243	5020	5525	5982	6500
2320	2529	2760	3041	3480	3934	4482	5303	5836	6319	6867
2447	2668	2911	3207	3671	4150	4727	5594	6156	6665	7243
2578	2810	3066	3378	3867	4371	4979	5892	6484	7021	7629
2712	2956	3225	3554	4067	4598	5238	6198	6821	7385	8025
2849	3105	3389	3734	4273	4831	5503	6512	7166	7759	8432
2990	3259	3556	3918	4484	5069	5775	6833	7520	8142	8848
3134	3416	3727	4107	4700	5313	6053	7162	7883	8535	9274
3281	3577	3903	4300	4922	5563	6338	7499	8253	8936	9711
3432	3741	4082	4498	5148	5819	6629	7844	8633	9347	10157
3586	3909	4265	4700	5379	6081	6927	8197	9021	9767	10613
3744	4081	4453	4906	5616	6348	7232	8557	9417	10196	11080
3905	4256	4644	5117	5857	6621	7543	8925	9822	10635	11556
4069	4436	4840	5333	6104	6900	7860	9301	10236	11083	12043
4237	4618	5039	5553	6355	7184	8184	9684	10658	11539	12539

Ring Load Pressure Tables (C Serie Travellers)

Select traveller no. (weight) and inner ring diameter to get the ring load created by the traveller.

Formulae Ring load:
$$L = \frac{m \cdot v^2}{r}$$

L = Ring load in mN
 v = Traveller speed in m/s
 m = Traveller weight in mg
 r = Ring radius in mm (Ring-Ø/2)

Ring Ø 40 mm

Traveller no.	14/0	13/0	12/0	11/0	10/0	9/0	8/0	7/0
Traveller weight	18.3	20	21.6	23.2	25	26.8	28.5	30.2
m/s	Ring load							
24	527	576	622	668	720	772	821	870
25	572	625	675	725	781	838	891	944
26	619	676	730	784	845	906	963	1021
27	667	729	787	846	911	977	1039	1101
28	717	784	847	909	980	1051	1117	1184
29	770	841	908	976	1051	1127	1198	1270
30	824	900	972	1044	1125	1206	1283	1359
31	879	961	1038	1115	1201	1288	1369	1451
32	937	1024	1106	1188	1280	1372	1459	1546
33	996	1089	1176	1263	1361	1459	1552	1644
34	1058	1156	1248	1341	1445	1549	1647	1746
35	1121	1225	1323	1421	1531	1642	1746	1850
36	1186	1296	1400	1503	1620	1737	1847	1957
37	1253	1369	1479	1588	1711	1834	1951	2067
38	1321	1444	1560	1675	1805	1935	2058	2180
39	1392	1521	1643	1764	1901	2038	2167	2297
40	1464	1600	1728	1856	2000	2144	2280	2416
41	1538	1681	1815	1950	2101	2253	2395	2538
42	1614	1764	1905	2046	2205	2364	2514	2664
43	1692	1849	1997	2145	2311	2478	2635	2792
44	1771	1936	2091	2246	2420	2594	2759	2923
45	1853	2025	2187	2349	2531	2714	2886	3058
46	1936	2116	2285	2455	2645	2835	3015	3195
47	2021	2209	2386	2562	2761	2960	3148	3336
48	2108	2304	2488	2673	2880	3087	3283	3479
49	2197	2401	2593	2785	3001	3217	3421	3626
50	2288	2500	2700	2900	3125	3350	3563	3775

■ Critical area: at too high load, increase of ring damages

6/0	5/0	4/0	3/0	2/0	1/0	1	2	3	4	5
32.2	35.1	38.3	42.2	48.3	54.6	62.2	73.6	81	87.7	95.3
927	1011	1103	1215	1391	1572	1791	2120	2333	2526	2745
1006	1097	1197	1319	1509	1706	1944	2300	2531	2741	2978
1088	1186	1295	1426	1633	1845	2102	2488	2738	2964	3221
1174	1279	1396	1538	1761	1990	2267	2683	2952	3197	3474
1262	1376	1501	1654	1893	2140	2438	2885	3175	3438	3736
1354	1476	1611	1775	2031	2296	2616	3095	3406	3688	4007
1449	1580	1724	1899	2174	2457	2799	3312	3645	3947	4289
1547	1687	1840	2028	2321	2624	2989	3536	3892	4214	4579
1649	1797	1961	2161	2473	2796	3185	3768	4147	4490	4879
1753	1911	2085	2298	2630	2973	3387	4008	4410	4775	5189
1861	2029	2214	2439	2792	3156	3595	4254	4682	5069	5508
1972	2150	2346	2585	2958	3344	3810	4508	4961	5372	5837
2087	2274	2482	2735	3130	3538	4031	4769	5249	5683	6175
2204	2403	2622	2889	3306	3737	4258	5038	5544	6003	6523
2325	2534	2765	3047	3487	3942	4491	5314	5848	6332	6881
2449	2669	2913	3209	3673	4152	4730	5597	6160	6670	7248
2576	2808	3064	3376	3864	4368	4976	5888	6480	7016	7624
2706	2950	3219	3547	4060	4589	5228	6186	6808	7371	8010
2840	3096	3378	3722	4260	4816	5486	6492	7144	7735	8405
2977	3245	3541	3901	4465	5048	5750	6804	7488	8108	8810
3117	3398	3707	4085	4675	5285	6021	7124	7841	8489	9225
3260	3554	3878	4273	4890	5528	6298	7452	8201	8880	9649
3407	3714	4052	4465	5110	5777	6581	7787	8570	9279	10083
3556	3877	4230	4661	5335	6031	6870	8129	8946	9686	10526
3709	4044	4412	4861	5564	6290	7165	8479	9331	10103	10979
3866	4214	4598	5066	5798	6555	7467	8836	9724	10528	11441
4025	4388	4788	5275	6038	6825	7775	9200	10125	10963	11913

Ring Load Pressure Tables (C Serie Travellers)


Select traveller no. (weight) and inner ring diameter to get the ring load created by the traveller.

Formulae Ring load:
$$L = \frac{m \cdot v^2}{r}$$

L = Ring load in mN
 v = Traveller speed in m/s
 m = Traveller weight in mg
 r = Ring radius in mm (Ring-Ø/2)

636Ring Ø 42 mm

Traveller no.	14/0	13/0	12/0	11/0	10/0	9/0	8/0	7/0
Traveller weight	18.3	20	21.6	23.2	25	26.8	28.5	30.2
m/s	Ring load							
24	502	549	592	636	686	735	782	828
25	545	595	643	690	744	798	848	899
26	589	644	695	747	805	863	917	972
27	635	694	750	805	868	930	989	1048
28	683	747	806	866	933	1001	1064	1127
29	733	801	865	929	1001	1073	1141	1209
30	784	857	926	994	1071	1149	1221	1294
31	837	915	988	1062	1144	1226	1304	1382
32	892	975	1053	1131	1219	1307	1390	1473
33	949	1037	1120	1203	1296	1390	1478	1566
34	1007	1101	1189	1277	1376	1475	1569	1662
35	1068	1167	1260	1353	1458	1563	1663	1762
36	1129	1234	1333	1432	1543	1654	1759	1864
37	1193	1304	1408	1512	1630	1747	1858	1969
38	1258	1375	1485	1595	1719	1843	1960	2077
39	1325	1449	1564	1680	1811	1941	2064	2187
40	1394	1524	1646	1768	1905	2042	2171	2301
41	1465	1601	1729	1857	2001	2145	2281	2417
42	1537	1680	1814	1949	2100	2251	2394	2537
43	1611	1761	1902	2043	2201	2360	2509	2659
44	1687	1844	1991	2139	2305	2471	2627	2784
45	1765	1929	2083	2237	2411	2584	2748	2912
46	1844	2015	2176	2338	2519	2700	2872	3043
47	1925	2104	2272	2440	2630	2819	2998	3177
48	2008	2194	2370	2545	2743	2940	3127	3313
49	2092	2287	2470	2653	2858	3064	3259	3453
50	2179	2381	2571	2762	2976	3190	3393	3595

 Critical area: at too high load, increase of ring damages

6/0	5/0	4/0	3/0	2/0	1/0	1	2	3	4	5
32.2	35.1	38.3	42.2	48.3	54.6	62.2	73.6	81	87.7	95.3
883	963	1051	1157	1325	1498	1706	2019	2222	2405	2614
958	1045	1140	1256	1438	1625	1851	2190	2411	2610	2836
1037	1130	1233	1358	1555	1758	2002	2369	2607	2823	3068
1118	1218	1330	1465	1677	1895	2159	2555	2812	3044	3308
1202	1310	1430	1575	1803	2038	2322	2748	3024	3274	3558
1290	1406	1534	1690	1934	2187	2491	2948	3244	3512	3817
1380	1504	1641	1809	2070	2340	2666	3154	3471	3759	4084
1474	1606	1753	1931	2210	2499	2846	3368	3707	4013	4361
1570	1712	1868	2058	2355	2662	3033	3589	3950	4276	4647
1670	1820	1986	2188	2505	2831	3226	3817	4200	4548	4942
1773	1932	2108	2323	2659	3006	3424	4052	4459	4828	5246
1878	2048	2234	2462	2818	3185	3628	4293	4725	5116	5559
1987	2166	2364	2604	2981	3370	3839	4542	4999	5412	5881
2099	2288	2497	2751	3149	3559	4055	4798	5280	5717	6213
2214	2414	2634	2902	3321	3754	4277	5061	5570	6030	6553
2332	2542	2774	3056	3498	3955	4505	5331	5867	6352	6902
2453	2674	2918	3215	3680	4160	4739	5608	6171	6682	7261
2578	2810	3066	3378	3866	4371	4979	5892	6484	7020	7629
2705	2948	3217	3545	4057	4586	5225	6182	6804	7367	8005
2835	3090	3372	3716	4253	4807	5477	6480	7132	7722	8391
2969	3236	3531	3890	4453	5034	5734	6785	7467	8085	8786
3105	3385	3693	4069	4658	5265	5998	7097	7811	8457	9190
3245	3537	3859	4252	4867	5502	6267	7416	8162	8837	9603
3387	3692	4029	4439	5081	5743	6543	7742	8520	9225	10025
3533	3851	4202	4630	5299	5990	6824	8075	8887	9622	10456
3682	4013	4379	4825	5522	6243	7112	8415	9261	10027	10896
3833	4179	4560	5024	5750	6500	7405	8762	9643	10440	11345

Ring Load Pressure Tables (C Serie Travellers)

Select traveller no. (weight) and inner ring diameter to get the ring load created by the traveller.

Formulae Ring load:
$$L = \frac{m \cdot v^2}{r}$$

L = Ring load in mN
 v = Traveller speed in m/s
 m = Traveller weight in mg
 r = Ring radius in mm (Ring-Ø/2)

Ring Ø 45 mm

Traveller no.	14/0	13/0	12/0	11/0	10/0	9/0	8/0	7/0
Traveller weight	18.3	20	21.6	23.2	25	26.8	28.5	30.2
m/s	Ring load							
24	458	501	541	581	626	671	714	756
25	497	543	587	630	679	728	774	821
26	538	588	635	682	735	788	838	888
27	580	634	685	735	792	849	903	957
28	624	682	736	791	852	914	971	1029
29	669	731	790	848	914	980	1042	1104
30	716	783	845	908	978	1049	1115	1182
31	765	836	903	969	1045	1120	1191	1262
32	815	890	962	1033	1113	1193	1269	1345
33	866	947	1023	1098	1184	1269	1349	1430
34	920	1005	1086	1166	1257	1347	1432	1518
35	975	1065	1150	1236	1332	1427	1518	1608
36	1031	1127	1217	1307	1409	1510	1606	1702
37	1089	1190	1286	1381	1488	1595	1696	1798
38	1149	1256	1356	1457	1570	1683	1789	1896
39	1210	1323	1428	1534	1653	1772	1885	1997
40	1273	1391	1503	1614	1739	1864	1983	2101
41	1337	1462	1579	1696	1827	1959	2083	2207
42	1404	1534	1657	1779	1917	2055	2186	2316
43	1471	1608	1736	1865	2010	2154	2291	2428
44	1540	1683	1818	1953	2104	2256	2399	2542
45	1611	1761	1902	2043	2201	2360	2509	2659
46	1684	1840	1987	2134	2300	2466	2622	2778
47	1758	1921	2075	2228	2401	2574	2737	2901
48	1833	2003	2164	2324	2504	2685	2855	3025
49	1910	2088	2255	2422	2610	2798	2975	3153
50	1989	2174	2348	2522	2717	2913	3098	3283

■ Critical area: at too high load, increase of ring damages

6/0	5/0	4/0	3/0	2/0	1/0	1	2	3	4	5
32.2	35.1	38.3	42.2	48.3	54.6	62.2	73.6	81	87.7	95.3
806	879	959	1057	1210	1367	1558	1843	2029	2196	2387
875	954	1041	1147	1313	1484	1690	2000	2201	2383	2590
946	1032	1126	1240	1420	1605	1828	2163	2381	2578	2801
1021	1113	1214	1338	1531	1731	1971	2333	2567	2780	3021
1098	1196	1306	1438	1646	1861	2120	2509	2761	2989	3248
1177	1283	1400	1543	1766	1996	2274	2691	2962	3207	3485
1260	1373	1499	1651	1890	2137	2434	2880	3170	3432	3729
1345	1467	1600	1763	2018	2281	2599	3075	3384	3664	3982
1434	1563	1705	1879	2150	2431	2769	3277	3606	3905	4243
1525	1662	1813	1998	2287	2585	2945	3485	3835	4152	4512
1618	1764	1925	2121	2428	2744	3126	3699	4071	4408	4790
1715	1869	2040	2248	2573	2908	3313	3920	4314	4671	5076
1814	1978	2158	2378	2722	3077	3505	4147	4564	4942	5370
1917	2089	2280	2512	2875	3250	3702	4381	4821	5220	5672
2022	2204	2405	2649	3032	3428	3905	4621	5085	5506	5983
2129	2321	2533	2791	3194	3611	4113	4867	5357	5800	6302
2240	2442	2664	2936	3360	3798	4327	5120	5635	6101	6630
2353	2565	2799	3084	3530	3991	4546	5379	5920	6410	6965
2470	2692	2937	3237	3704	4188	4770	5645	6212	6726	7309
2589	2822	3079	3393	3883	4389	5000	5917	6512	7050	7661
2710	2955	3224	3552	4066	4596	5236	6195	6818	7382	8022
2835	3090	3372	3715	4253	4807	5476	6480	7132	7721	8391
2962	3229	3524	3882	4444	5023	5722	6771	7452	8068	8768
3093	3371	3678	4053	4639	5244	5974	7069	7780	8423	9153
3226	3516	3837	4227	4838	5469	6231	7373	8114	8785	9547
3361	3664	3998	4405	5042	5700	6493	7683	8456	9155	9948
3500	3815	4163	4587	5250	5935	6761	8000	8804	9533	10359

Possible cause	Explanation	Action
Balloon breaker / yarn guide	<ul style="list-style-type: none"> • Badly centered lead to variable yarn tension • Roughened surface roughens the yarn 	<ul style="list-style-type: none"> • Correct centring • Replacement
Cop diameter	<ul style="list-style-type: none"> • Protruding fibres of cop are caught by traveller and detached 	Cop diameter to be set to the ring diameter minus 4 mm. Use of a traveller cleaner
Yarn passage of traveller form	<ul style="list-style-type: none"> • Yarn is roughened because of a too narrow yarn passage • Worn out yarn passage clamps the yarn and roughens it. This produces neps 	Use traveller with larger yarn passage (extension of traveller life time)
Too high yarn tension	<ul style="list-style-type: none"> • Traveller weight too high, either because of wrong number or heavily worn, through which: <ul style="list-style-type: none"> - friction of the yarn leads to roughening resp. hairiness - worn out position comes in contact with the yarn and roughens it 	Reduce traveller weight, if necessary select other traveller types (extension of traveller life time)
Too low yarn tension	<ul style="list-style-type: none"> • Traveller weight too low, through which <ul style="list-style-type: none"> - poor fibre binding at the spinning triangle - strong friction of the yarn balloon on anti-balloon ring, resp. beating balloon separator - bad twist transmission to the spinning triangle 	Increase traveller weight, if necessary select other traveller types
Ring condition	<ul style="list-style-type: none"> • Worn out raceway causes uneven running of the traveller 	Replace rings
Electrostatic charge	<ul style="list-style-type: none"> • Material gets electrostatic charged and fibres protruding out of the yarn core 	<ul style="list-style-type: none"> • Increase the humidity • Make sure machine and ring rails have electrostatic dissipation
Traveller	<ul style="list-style-type: none"> • Yarn is roughened by the yarn passage of the traveller 	<ul style="list-style-type: none"> • Exchange travellers • Reduce traveller running time
Too light traveller	<ul style="list-style-type: none"> • Poor twist contraction of the fibres in the spinning triangle • Heavy friction of balloon on balloon breaker 	<ul style="list-style-type: none"> • Increase traveller weight or choose another traveller type
Too heavy traveller	<ul style="list-style-type: none"> • Friction of the yarn leading to roughening and hairiness • Traveller wear in yarn passage area, causing roughening 	<ul style="list-style-type: none"> • Reduce traveller weight or choose another traveller type • Reduce traveller running time
Yarn tension varies	<ul style="list-style-type: none"> • Poor ring centering • Poorly centered yarn guides • Yarn guides with rough surfaces • Damaged balloon breaker • Damaged tubes 	<ul style="list-style-type: none"> • Re-centre rings, spindles and thread guides • Replace damaged parts • Replace balloon breaker • Insert new tubes
Yarn passage	<ul style="list-style-type: none"> • Yarn is roughened in narrow yarn clearance • Worn out yarn passages clamps the yarn and roughens it 	Use a traveller with a larger yarn clearance (extension of traveller life time)

Yarn breaks are caused by many reasons. They are directly influencing the machine efficiency of the ring spinning frame and production as well as the yarn quality. Therefore low rates of yarn breaks are essential for today's modern spinning mills.

Yarn breaks are caused by many factors like:

- raw material selection
- machine condition (card, draw frame, ring spinning frame)
- settings of ring frame drafting system
- condition of ring and traveller
- centering of yarn guide elements.

By choosing the right ring and traveller combination the running conditions of the ring spinning frame can be substantially influenced.

Generally one can distinguish between yarn breaks during spinning and yarn breaks during doffing.

Yarn Breaks during the Spinning Process

Cause of yarn break	Corrective measurements
Raw material	Adapt fibre quality to spinning requirements
Wrong climatic conditions	Set appropriate climate conditions
Spindle speed too high	Adjust spindle speed to yarn parameters (Yarn strength etc.)
Traveller worn out	Shorten traveller replacing cycle
Ring condition	Exchange rings
Spinning tension not correct	Adapt traveller weight
Traveller type does not match	Try different traveller shape and profile
Poor raw material quality	Improve raw material quality
Spinning tension peaks	Check centering of rings, anti-balloon rings and thread guides

Yarn Breaks during Doffing

Cause of yarn break	Corrective measurements
Yarn unthreading from traveller	Spinning down speed to low, adapt traveller type
Jamming of traveller	Check condition of ring and traveller
Balloon collapses during slowing down or starting up	Speed down or up faster, increase traveller weight

Yarn Hairiness

Hairiness occurs because some fibre ends protrude from the yarn body, some looped fibres arch out from the yarn core and some wild fibres in the yarn.

Excess hairiness influences the running conditions in the following processes:

- winding: higher yarn tension and fluff
- sizing
- warping
- weaving: fluff generation, weft insertion, shedding etc.

Basically one has to distinguish between yarn hairiness and cops hairiness.

Cop hairiness occurs when excessive fibers are protruding from the surface of a full cop.

Yarn hairiness occurs because excessive long and much fibers are protruding from the yarn core.



To measure the yarn hairiness two devices are used widely.

Uster Hairiness Tester

The Uster test is defined as follows: H = total length (measured in centimetres) of all the hairs within one centimetre of yarn. (The resulting hairiness value detected by the tester correlates with the average of all measurements. E.g. at a measuring of 400 m, the average of 40.000 individual values). The hairiness H is an average value, giving no indication on the distribution of the length of the hairs.

Zweigle Hairiness Tester

The number of hairs of different lengths are counted separately and classified to the following length rates: 1, 2, 3, 4, 6, 8, 10, 12, 15, 18, 21, 25 mm.

In addition, the S_3 value is given, which is defined as follows:

S_3 = Sum (number) of hairs 3 mm and longer.

The Zweigle testing equipment gives the complete distribution of the different lengths of the hairs.

Ring Life Time

Parameter	Ring loading pressure		Remarks	
	-	+		
Climate	Inconsistent	Consistent	Inconsistent climate has a negative influence on the general running behavior with the consequence of a higher ring load	
Machines	Centring	Poor	Good	Badly centered rings, Balloon control ring (BE) and yarn guide lead to different loads
	Vibrations	Heavy	None, slight	Irregular load leads to premature wear
Fibre	Cotton	Dry	Large wax proportion	Large wax proportions improve lubrication of traveller
	Man made fibres	Matted	Bright	Matted fibres contain abrasive particles (e.g. titanium oxide)
	Finishing agent	Aggressive	Lubricating	Influences lubrication of traveller
Yarn	Yarn count	Coarse	Fine	Higher load when heavy travellers are used
	Twist	Warp	Tricot	Warp yarns are spun with heavy travellers, causing higher load and reduced lubrication of travellers (less hairiness)
Spinning geometry	Ring diameter	Smaller	Larger	The centrifugal force of the traveller is higher at small ring diameters
Traveller	Type	High-arch	Low-arch	More favourable lubrication of travellers with low-arch travellers
	Service life	Too long	Right	Severely worn travellers damage travellers' running surfaces of the rings
Performance	Traveller speed	High	Normal	Higher load at high speeds
	Ring inlet	Too short	According to specification	Ring inlet must be carried out according to fibre and ring type

- The intelligent Texparts Ring Coating ensures a longer lifetime compared to conventionally coated rings
- The main goal in the development of the Texparts Ring Coating was an extended ring life time.

SPINDLE DRIVE IN RING SPINNING MACHINES

The following types of drive systems are commonly used for spindles in ring spinning machines:

- **Four-spindle Tape Drive**
- **Tangential Belt Drive**
- **Sectional Drive**

All these spindle drive types require either tapes or belts for power transmission from motor to spindle. With all of these drive systems, it is necessary to press the tape or belt with sufficient force against the spindle wharve. Deviations of the spindle out of its central position in relation to the spinning ring should be avoided here. The spindles must on the one hand reliably achieve the required spindle speed with as little slip as possible, not displaying any notable speed differences between the spinning points of a machine; and on the other hand, there is the technological requirement to accelerate the spindles up to their rated speed in the shortest possible time after repairing yarn breaks.

Texparts supplies contact pressure assemblies of the finest design and quality, as needed for all tape and belt drive types.

Tangential and Sectional Drive

Tension Pulleys SR (see chapter 2, page 10-13)

SR 28 tension pulleys with flanges arranged at top or bottom are used in the tangential belt drive with 2 independent tangential belts for the left-hand and right-hand ring frame sides respectively for guiding the belt return movement.

Contact Roll Assemblies AR (see chapter 2, pages 2-7)

There are a number of different standard series available depending on application:

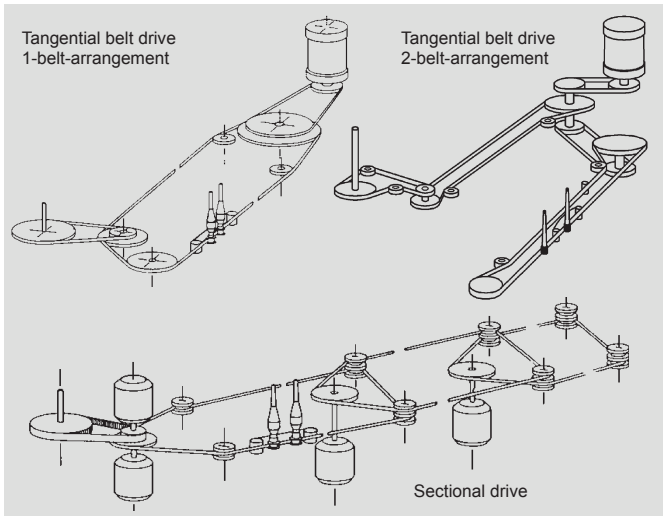
- AR 5047 with 50 mm shell diameter for belts up to 40 mm width
- AR 5024 with 50 mm shell diameter for belts up to 16 mm width
- AR 3528 with 35 mm shell diameter for belts up to 20 mm width

The contact roll assembly AR 5047 is used in ring spinning machines with single-belt or double-belt tangential drive. Its design allows universal interchangeability with the previous standard variants AR 28, AR 45, AR 13/15. The shell diameter of 50 mm permits lower AR speeds, which in turn has a positive effect on service life, noise emission, re-lubrication intervals and the necessary energy requirement. For dependable belt guidance, the AR 5047 is fitted with two flanges.

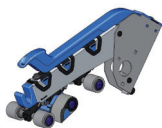
The contact roll assembly AR 5024 is used in ring spinning machines with sectional drive. It is also universally interchangeable with the previous AR 50-1246 555. For ring spinning machines with sectional drive, there are also versions available with only one pulley (arranged left or right of holding angle).

The contact roll assembly AR 3528 is used in ring spinning machines with multi-motor single tangential belt drives.

All AR variants comprise two contact roll pulleys mounted on a spring bracket in the holding angle of the spindle rail. The defined sag of the leaf spring of the spring bracket determines the contact pressure of the contact roll pulleys against the belt. The pulley spacing is twice that of the spindles.



TEXPARTS WEIGHTING ARMS FOR SHORT STAPLE RING SPINNING MACHINES



Mechanical drafting system
Weighting arms
PK 2600 SE Series
Product data see:
Chapter 5, pages 2 – 9
Chapter 10, pages 37 – 48



Mechanical drafting system
Weighting arms
PK 2630 SEH
Product data see:
Chapter 5, pages 10 - 13
Chapter 10, pages 49 - 56



Mechanical drafting system
Weighting arms
PK 2000 Plus
Product data see:
Chapter 5, pages 14 - 17
Chapter 10, pages 57 - 67

GENERAL INFORMATION ON TEXPARTS SHORT STAPLE WEIGHTING ARMS

Draft Sizes

Total Draft

The amount of total draft to be applied mainly depends on the type and composition of the fibre material and the quality of the roving. The normal total draft range for speed-frame roving is, in practice, as much as 50 (see fig. A Total drafts below).

The choice of draft range depends on the desired yarn qualities and the operating conditions of the frame (ends down behaviour). In-house spinning trials should be carried out to determine the optimum draft range. Fig. A (Total drafts) shows common draft ranges arranged according to different fibre materials.

Rear Draft

The purpose of rear drafting zone is to slightly tension the roving and to feed fibre material to the main draft zone in a well-stretched state. The common rear draft for series PK 2600 SE and PK 2630 SEH ranges between 1.15 and 1.3.

In special cases, rear drafts greater than 1.3 are possible with the PK 2655 SE and PK 2665 SE.

Draft ranges for PK 2630 SE, PK 2635 SE, PK 2630 SEH

Rear drafts	Total drafts	
1.15 - 1.3	↑ 12-20	↑ Extremely short carded cotton Carded cotton Combed cotton Blends of cotton and man-made fibres ↓ Pure man-made fibres
	↓ 20-35	
	↓ 20-40	
	↓ 25-50	
	↓ 25-70	

Draft ranges for PK 2655 SE, 2665 SE

Rear drafts	Total drafts	
1.15 - 1.3	↑ up to 50	↑ Cotton Man-made fibres ↓ Blends
1.3 - 1.6	↓ 50-70	
1.6 - 1.8	↓ over 70	

Fig. A: Total drafts

When determining the optimum rear zone draft care should be taken on controlled draft of the roving in the rear zone. Hard-twisted roving needs a higher rear zone draft whereas a too strong loosening effect on the roving indicates the necessity for reducing the rear draft. Values of the rear zone settings depend on the fibre to be spun, fibre length and roving twist.

Front Zone Setting

The front zone setting depends on the type of top apron cradle and on the fibre length. In Table A (Summary of different weighting arm types for short staple drafting systems) on pages 10-41, 10-52 and 10-61, the distance HF (front zone = centre of bottom apron roller/centre of front bottom roller) is shown for the respective bottom roller diameters (I, II). Differences between bottom roller diameters and the values given in the table must be taken into consideration when the front zone is determined.

The fronthing of the front top roller 1 in relation to the front bottom roller is 2 mm as a standard. (System dimension for Series PK 2600 SE: support rod/front bottom roller = 203 mm).

Apron top roller 2 has a backhang of 2 mm in relation to the axis of the bottom roller II (fig. B). Basically, when adjusting the front zone setting you should assure that the operation of the individual draft elements doesn't get impaired (e.g. when front zone condensers are used).

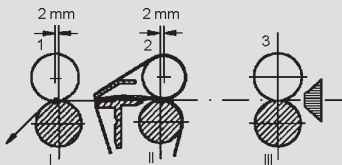


Fig. B: Fronthing of front top roller and backhang of middle top roller

Rear Zone Setting

The rear zone setting depends on the type of fibre to be spun, fibre length and also on the roving twist. Larger rear zone settings should be selected if the material to be processed is difficult to be drafted. For hard twisted rovings or man-made fibres with strong fibres/fibre bonding we recommend weighting arms PK 2655 SE and PK 2665 SE (see Fig. C).

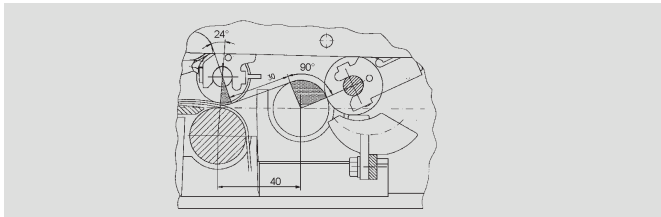


Fig. C: Roving guidance in the rear zone for PK 2655 SE and PK 2665 SE

Top Apron Cradles and Top Aprons

Depending on the application, weighting arms for short staple ring spinning machines can be fitted with different top apron cradles:

- a) Short staple top apron cradles OH 2122 and OH 2022**
for cotton and man-made fibres up to 45 mm length and for blends thereof
- b) Short to medium top apron cradles OH 2132**
for cotton and man-made fibres up to 45 mm length and blends thereof
- c) Medium staple top apron cradles OH 2142 and OH 2042**
for cotton fibres over 40 mm length, man-made fibres and blends thereof up to cut lengths of 54 mm.
- d) Long staple top apron cradles OH 122**
for man-made fibres of cut lengths up to approx. 60 mm.

The top apron cradles OH 2122 / OH 2132 / OH 2022 / OH 2142 / OH 2042 offer the following advantages:

- Aprons can be exchanged without the apron unit being dismantled, i.e. with the top apron cradle OH still in place.
- Individual apron tensioning by means of movable apron guide places, less strain on the fibres and gentle guidance during the drafting process.
- Low-friction apron running ensures low drive torques and long apron working time.

Opening X at Apron Release Point

The vertical distance between the front edge of the top apron cradle, the type of aprons (top and bottom) and the bottom apron nose bar determine the intensity with which the fibre material is controlled and guided between top and bottom aprons (Fig. D). To achieve optimum drafting conditions, the opening X can be adjusted by using distance clips. Appropriate figures on the product data pages of each weighting arm show which distance clips are to be used to provide the respective opening X for the various top apron cradles. As a basic rule of thumb: the smaller the opening, the more even the yarn.

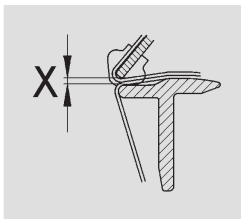


Fig. D: Opening X

The selection of the opening X also depends on the following parameters:

- type of fibre material
- fibre mass in the main drafting zone
- roving and yarn count
- type of top apron cradle
- type of apron and dimensions
- type of bottom apron nose bar and its position.

Extremely narrow openings result in good yarn qualities, though frame operating conditions (ends down, undrafted portions etc.) may, under certain circumstances, be influenced negatively. The ideal opening for the fibre material to be processed should be determined by mill trials.

Top Roller Cots









Top rollers for weighting arms are supplied as top rollers with cots ready-ground as standard. Subsequent grinding of the cots may reduce the cot diameter of rear and front top rollers by a maximum of 3 mm.

Within this range it is not necessary to readjust the height of the weighting arm or increase the loading. The choice of cot mainly depends on the type of fibre material to be processed and its running properties.



Accotex cots, having a hardness between 60 and 83 Shore A, are used for rear and front top rollers today.

Texparts supplies the apron top roller LP 1003 with plastic sleeves as standard. If requested, the apron top roller LP 1002 with Accotex cot ME 480 (80 Shore A) can also be supplied.


Accotex Front Top Roller Cots for Ring Spinning Machines

Product	Hardness Shore A	Colour	Yarn Count (> = Ne)			Front top rollers
			100% CO	CO / MMF	100 % MMF	
AccoSmart AS-6	Soft	lavender	60			
AccoSmart AS-7	Medium	green	30	40	50	
AccoSmart AS-8	Hard	blue	10	18	18	
J-460	60	burgundy	60			
J-463	63	lavender	30	40	50	
J-465	65	turquoise	18	18	30	
J-466	67	yellow	20	30	30	
J-470	70	green	20	30	30	
J-476	76	blue	10	18	18	
J-490	83	grey	5	5	5	

Accotex Rear Top Roller Cots for Ring Spinning Machines

Product	Hardness Shore A	Colour	Yarn Count (> = Ne)			Rear top rollers
			100% CO	CO / MMF	100 % MMF	
J-476	76	blue	10	18	18	
J-490	83	grey	5	5	5	

Accotex Apron Top Roller Cots for Ring Spinning Machines

Product	Hardness Shore A	Colour	Yarn Count (> = Ne)			Apron top rollers
			100% CO	CO / MMF	100 % MMF	
ME-480	80	black				

Bottom Aprons

The dimensions of the bottom aprons depend on the design of the substructure of the drafting system. In practice, two types of substructure are most common in practice:

1. Long bottom apron system

Bottom aprons are guided and pre-tensioned by a tensioning link.

2. Short bottom apron system

Bottom aprons are guided by specially designed bottom apron nose bars, no tensioning link is provided.

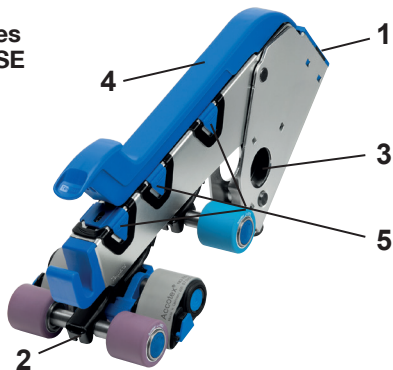
WEIGHTING ARMS PK 2600 SE SERIES FOR SHORT STAPLE RING SPINNING MACHINES

The arms of the PK 2600 SE series with mechanical load of top rollers are designed for use in 3-roller double apron drafting arrangements for spinning cotton, man-made fibres and blends thereof up to 60 mm fibre length.

SE stands for single element and means absolute independent working weighting elements. This feature gives you the advantage of very flexible settings of draft field distances. In case of damage of a single element, eg. because of fibre lappings, only the single element has to be changed.

Various sizes of top apron cradle OH are available to suit the different categories of fibre length.

Main features of PK 2600 SE



1. Height setting adjustment:

- Quick and very accurate
- Maintenance free

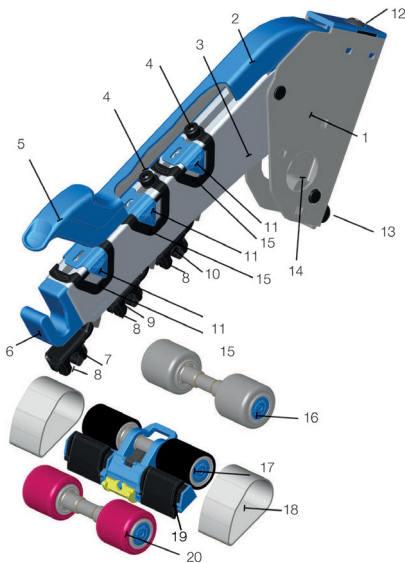
2. Independent working weighting elements:

- Advantage of very flexible setting of draft field distances
- Replacement of only one weighting element is possible
- No fixed front hang

3. Simple mounting and secure fixing of the weighting arm onto support rod

4. New lever construction with anti-rust function

5. Visual load indicator for checking the load alignments



Weighting arm

- 1 Bracket
- 2 Lever
- 3 Frame
- 4 Fixing screw
- 5 Handle
- 6 Clearer roller holder
- 7 Front weighting arm
- 8 Saddle spring
- 9 Middle weighting element ¹⁾
- 10 Rear weighting element
- 11 Load indicator
- 12 Height setting screw
- 13 Locking screw
- 14 Clamp
- 15 Load indicator frame

Components

(not included in scope of supply)

- 16 Rear top roller
- 17 Apron top roller
- 18 Top apron
- 19 Top apron cradle
- 20 Front top roller

Types PK 2630 SE and PK 2635 SE weighting arms are mainly used for spinning longer staple fibres. They are designed for this purpose using rear and front top rollers with a diameter of 35 mm. For spinning particularly fine yarns, materials that are difficult to draft and for spinning with high total drafts, we recommend the weighting arms PK 2655 SE and PK 2665 SE.

¹⁾ In case of PK 2635 SE the middle guide element is 2.5 mm longer than on the PK 2630 SE.

Standard Equipment for Weighting Arms PK 2600 SE Series

Weighting arm	PK 2630 SE	PK 2635 SE	PK2655 SE	PK 2665 SE
Top apron cradle and accessories				
OH 2122 (short) Tw 70, 75	■	■	■	■
OH 2132 (short-middle) Tw 70, 75	■	■	■	■
OH 2142 (middle) Tw 70, 75	■	■	■	■
OH 122 (long) Tw 68.4, 75, 82.5	■	■	■	■
Accotex Aprons PR	■	■	■	■
Clips (1 per OH)	■	■	■	■
Rear and front top roller				
LP 1002 Tw 70, 75	■	■	■	■
LP 1202* Tw 70, 75	■	■	■	■
Accotex cot Ø 30	■		■	
Accotex cot Ø 35		■		■
Apron top roller				
LP 1003 (standard) with special sleeve Tw 70, 75	■	■	■	■
LP 1203* (standard) with special sleeve Tw 70, 75	■	■	■	■
LP 1002 (optional) with ME-480 cot Ø 25 Tw 70, 75	■	■	■	■
LP 1202* (optional) with ME-480 cot Ø 25 Tw 70, 75	■	■	■	■

* Exclusively for Zinser

Draft Field Settings PK 2600 SE Series

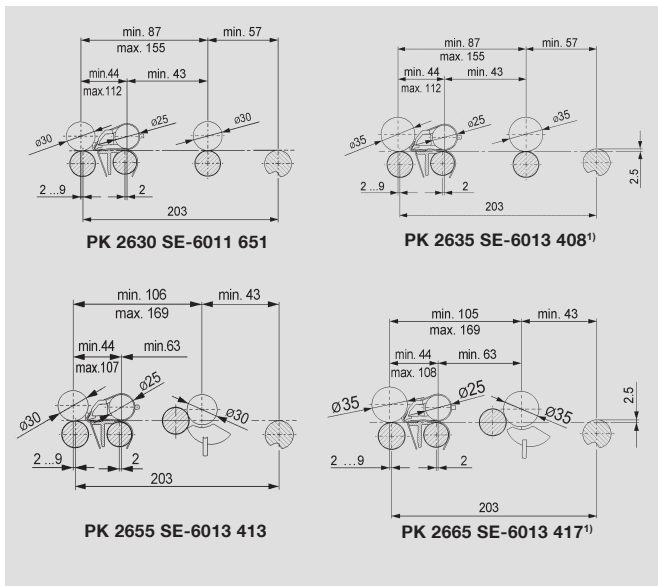


Fig. A: Draft field settings PK 2600 SE series

¹⁾ In case of PK 2635 SE / PK 2665 SE the middle guide element is 2.5 mm longer than the one of the PK 2630 SE / PK 2655 SE.

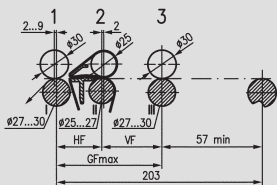
The size of the respective cradle used determines the front zone setting.
The different types of top apron cradles OH, draft field settings and maximum fibre length will be found in chapter 5, pages 2-9.

Weighting Arms, Zone Settings and Maximum Fibre Length

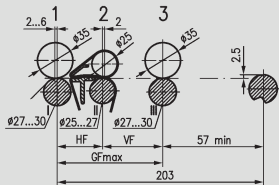
Weighting arm	Top apron cradle	Bottom roller diameter			Draft field mm			Tot. draft field GF mm max.	Fibre length max. mm
		I	II	III	HF	VF min	VF common ¹⁾		
PK 2630 SE-6011 651	OH 2122	25/27	25/27	25/27	44	34	1)	143	45
	OH 2132				44		1)		45
	OH 2142				53		1)		54
	OH 132				53		1)		54
	OH 122				68		1)		60
PK 2635 SE-6013 408	OH 2122	27/30	25/27	27/30	46	34	1)	143	45
	OH 2132				46		1)		45
	OH 2142				55		1)		54
	OH 132				55		1)		54
	OH 122				70		1)		60
PK 2655 SE-6013 413	OH 2122	25/27	25/27	25/27	44	36	1)	132	45
	OH 2132				44		1)		45
	OH 2142				53		1)		54
	OH 132				53		1)		54
	OH 122				68		1)		60
PK 2665 SE-6013 417	OH 2122	27/30	25/27	27/30	46	36	1)	132	45
	OH 2132				46		1)		45
	OH 2142				55		1)		54
	OH 132				55		1)		54
	OH 122				70		1)		60

Table A: Summary of weighting arms PK 2600 series for short staple drafting systems

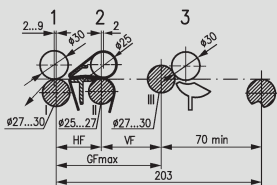
¹⁾ Depends on the fibre to be spun, fibre length and roving twist.



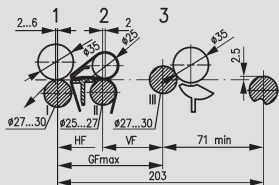
PK 2630 SE-6011 651



PK 2635 SE-6013 408



PK 2655 SE-6013 413



PK 2665 SE-6013 417

Fig. B: Draft field settings for PK 2600 SE weighting arms series

Saddle Load

Roller load of front element

To achieve good yarn quality, it is advisable to use the 3rd load stage (15 daN) for the front top roller when processing cotton and blends thereof. The second load stage (12.5 daN) offers greater flexibility and enhanced load pressure adjustment to suit the fibre material to be spun. Lower loads extend the lifetime of cots, aprons and bearings. Pure man-made fibres, high-twisted rovings, and fine yarn counts may require the 5th load stage (20 daN). After in-house spinning trials it is also possible to choose the new 4th load stage (17.5 daN).

Roller load of middle and rear element

The load of the rear element of PK 2630 SE/ PK 2635 SE weighting arms can be set in five load steps from 10 to 20 daN. The range of the five load steps of the middle element reaches from 8 to 18 daN.

Thanks to the increased number of load pressure setting options the spinning process can be adjusted perfectly to suit even critical fibres. If the OH 2142 (OH medium) is used to process relatively long fibres or to spin fine yarn counts, the medium load (15.5 daN) should be used at the apron top roller.

Load position	Load Front element PK 2630 SE PK 2635 SE PK 2655 SE PK 2665 SE	Load Middle element PK 2630 SE PK 2635 SE PK 2655 SE PK 2665 SE	Load Rear element PK 2630 SE PK 2635 SE	Load Rear element PK 2655 SE PK 2665 SE
1	10 daN	8 daN	10 daN	
2	12.5 daN	10.5 daN	12.5 daN	
3	15 daN	13 daN	15 daN	
4	17.5 daN	15.5 daN	17.5 daN	
5	20 daN	18 daN	20 daN	18 daN (only one load step provided)

Setting the Load on Front, Middle and Rear Element

Load on front, middle and rear weighting element can be set in five stages. Setting can be activated by allen key SW 3 1255 216.

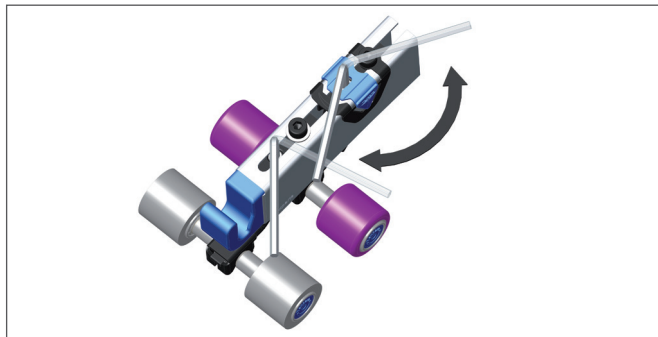
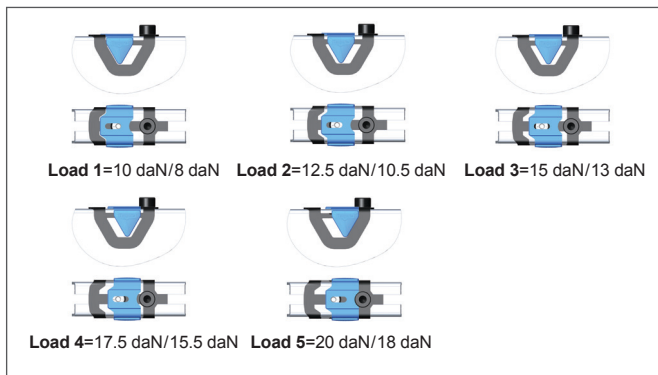


Fig. C: Load stages on front, middle and rear element of PK 2600 SE series weighting arms and their activation with allen key SW 3 1255 216

Top Apron Cradles, Top Aprons and Distance Clips for PK 2600 SE Series

Top apron cradles OH Ref.No.	Gauge Tw [mm]	Top aprons general designation	Basic equipment Dist. clips ¹⁾ with colour Ref.No
OH 2122-6020 689	70	PR 28	OLC-0017 705 lilac
OH 2122-6018 321	75	PR 28	OLC-0964 119 white
OH 2022-1247 889	82.5	PR 28	OLC-6006 661 light green
OH 2132-6023 011	70	PR 2839	OLC-0017 705 lilac
OH 2132-6023 589	75	PR 2839	OLC-0964 119 white
			OLC-6006 661 light green
OH 2142-6020 803 ²⁾	70	PR 2813	OLC-0964 117 red
OH 2142-6022 727 ²⁾	75	PR 2813	OLC-0964 118 yellow
OH 132-0963 671	82.5	PR 323	OLC-0964 119 white
OH 122-0963 495	68.4	PR 028	OLC-0964 118 yellow
OH 122-0963 500	75	PR 032	OLC-0964 119 white
OH 122-0963 511	82.5	PR 032	OLC-0017 627 grey

Fig. D: Range of top apron cradles, top aprons and distance clips for PK 2600 Series weighting arms

Opening X*

Distance clip OLC		Top apron cradle					
Colour	Ref.No.	OH 2022 (short)	OH 2122 (short)	OH 2132 (short-medium)	OH 2142 (medium)	OH 132 (medium)	OH 122 (long)
red	0964 117	-	-	1.4	2.4	2.5	2.6
chrome yellow	6011 878	1.9	-	1.8	2.6	2.9	3.0
yellow	0964 118	2.2	-	2.1	2.8	3.3	3.4
lilac	0017 705	2.5	2.5	2.4	3.2	3.3	3.4
white	0964 119	2.9	2.8	2.8	3.5	3.6	3.7
light green	6006 661	3.1	3.1	3.3	3.9	4.1	4.0
grey	0017 627	3.3	3.3	3.5	4.0	4.1	4.2
turquoise	6006 662	3.6	3.6	3.7	4.5	4.6	4.5
black	0964 120	3.8	3.8	3.9	4.6	4.6	4.7
orange	6006 663	4.4	4.4	4.5	5.3	5.3	5.3
beige	0004 587	4.8	4.8	5.3	6.0	5.7	5.7
green	0004 588	5.5	5.5	5.9	6.6	6.1	6.2

Fig. E: OLC Distance clips in combination with Texparts top apron cradles
(The figures in the column give the values for the opening X in mm.)

¹⁾ One clip per cradle is required for each type of OH. These clips are not included in standard OH supply and have to be ordered separately.

²⁾ For use in weighting arms of **PK 2600 series** (high load setting (15.5 daN) at the middle element recommended).

* See Chapter 10-34.

The following information (see figs. F-1 to F-6) is intended as a guide for the choice of distance clips to be used for various yarn counts.

Colour of Distance Clip		yellow	lilac	white	light green	grey	tur-quoise	black	orange	beige
OH 2122 Opening "X" in mm		–	2.5*	2.8*	3.1	3.3*	3.6	3.8	4.4	4.8
Ne	Nm									
6	10									
10	17									
20	34									
30	51									
40	68									
>40	>68									

Fig. F-1: Choice of distance clips in combination with Texparts top apron cradle OH 2122

Colour of Distance Clip		red	chrome yellow	yellow	lilac	white	light green	grey	tur-quoise	black
OH 2132 Opening "X" in mm		1.4	1.8	2.1	2.4	2.8	3.3	3.5	3.7	3.9
Ne	Nm									
6	10									
10	17									
20	34									
30	51									
40	68									
>40	>68									

Fig. F-2: Choice of distance clips in combination with Texparts top apron cradle OH 2132

* Basic supply of distance clips. Clips are not included in OH supply.

Colour of Distance Clip	red	chrome yellow	yellow	lilac	white	light green	grey	tur-quoise	black
OH 2022 Opening "X" in mm	-	1.9	2.2*	2.5*	2.9*	3.1	3.3	3.6	3.8
Ne Nm									
6 10									
10 17									
20 34									
30 51									
40 68									
>40 >68									

Fig. F-3: Choice of distance clips in combination with Texparts top apron cradle OH 2022

Colour of Distance Clip	red	chrome yellow	yellow	lilac	white	light green	grey	tur-quoise	black
OH 2142 Opening "X" in mm	2.4*	2.6	2.8*	3.2	3.5*	3.9	4.0	4.5	4.6
Ne Nm									
6 10									
10 17									
20 34									
30 51									
40 68									
>40 >68									

Fig. F-4: Choice of distance clips in combination with Texparts top apron cradle OH 2142

* Basic supply of distance clips. Clips are not included in OH supply.

Colour of Distance Clip		red	chrome yellow	yellow	lilac	white	light green	grey	tur-quoise	black
OH 132 Opening "X" in mm		2.5*	2.9	3.3*	3.3	3.6*	4.1	4.1	4.6	4.6
Ne	Nm									
6	10									
10	17									
20	34									
30	51									
40	68									
>40	>68									

Fig. F-5: Choice of distance clips in combination with Texparts top apron cradle OH 132

Colour of Distance Clip		red	chrome yellow	yellow	lilac	white	light green	grey	tur-quoise	black
OH 122 Opening "X" in mm		2.6	3.0	3.4*	3.4	3.7*	4.0	4.2*	4.5	4.7
Ne	Nm									
6	10									
10	17									
20	34									
30	51									
40	68									
>40	>68									

Fig. F-6: Choice of distance clips in combination with Texparts top apron cradle OH 122

* Basic supply of distance clips. Clips are not included in OH supply.

WEIGHTING ARMS PK 2630 SEH FOR SHORT STAPLE RING SPINNING MACHINES

The latest addition to the PK 2600 Series, the PK 2630 SEH is designed for ring frames with hexagonal support rod.

PK 2630 SEH Advanced versatility

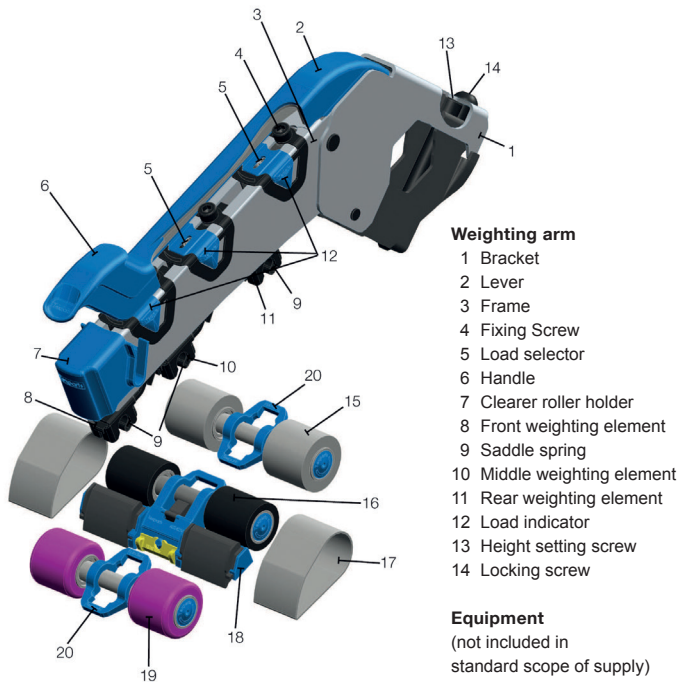


Saurer Components made the well-known weighting arm series PK 2600 SE even more versatile. The new PK 2630 SEH can be mounted on ring-frames with hexagonal support rods. Technology competence combined with fully automated innovative assembly methods ensure new performance levels not yet seen on the market.

Each PK 2630 SEH can be separately mounted and replaced at every spinning position. The new design now allows to use the proven benefits of the established PK 2630 SE on Rieter and LMW ring frames as well. Keeping the spinning geometry of these machines was a special challenge. Now it is possible to use the full flexibility of setting possibilities for load and drafting zones also with Rieter and LMW ring frames.

Weighting Arm PK 2630 SEH

The PK 2630 SEH weighting arm is designed to use rear and front top rollers with a diameter of 32 mm. Top rollers with a saddle diameter of 10 mm can also be used as front and top rollers with an additional adapter piece.



Weighting arm

- 1 Bracket
- 2 Lever
- 3 Frame
- 4 Fixing Screw
- 5 Load selector
- 6 Handle
- 7 Clearer roller holder
- 8 Front weighting element
- 9 Saddle spring
- 10 Middle weighting element
- 11 Rear weighting element
- 12 Load indicator
- 13 Height setting screw
- 14 Locking screw

Equipment

(not included in standard scope of supply)

- 15 Rear top roller
- 16 Apron top roller
- 17 Top apron
- 18 Top apron cradle
- 19 Front top roller
- 20 Spacer ¹⁾

¹⁾ The spacer is needed in case of the use of LP with different shape.

Standard Equipment for Weighting Arm PK 2630 SEH

Weighting arm PK 2630 SEH

Top apron cradles and accessories

OH 2122 (short) Tw 70, 75 ■

OH 2132 (short-middle) Tw 70, 75 ■

OH 2142 (middle) Tw 70, 75 ■

Accotex Aprons PR ■

Clips (1 per OH) ■

Rear and front top roller

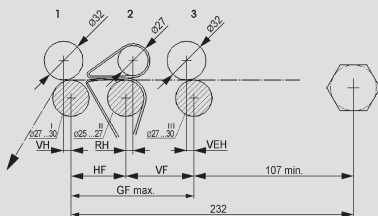
LP 1002 Tw 70, 75 ■

Accotex cot \varnothing 32 ■

Apron top roller

LP 1003 (standard) with special sleeve
Tw 70, 75 ■

Draft Field Settings PK 2630 SEH



PK 2630 SEH

Fig. A: Draft field settings PK 2630 SEH

The size of the respective cradle used determines the front zone setting. The different types of top apron cradles OH, draft field settings and maximum fibre length will be found in chapter 5, pages 10-13.

Zone Settings and Maximum Fibre Length

Weighting arm	Top apron cradle	Bottom roller diameter			Draft field mm			Tot. draft field GF mm max.	Fibre length max. mm
		I	II	III	HF	VF min	VF common ¹⁾		
PK 2630 SEH-6022 400	OH 2122	27/30	25/27	27/30	44	55	1)	132	45
	OH 2132	27/30	25/27	27/30	53	55	1)	132	45
	OH 2142	27/30	25/27	27/30	68	55	1)	132	54

Table A: Weighting arm PK 2630 SEH-6022 400

¹⁾ Depends on the fibre to be spun, fibre length and roving twist.

Saddle Load

The load of the rear and front element of PK 2630 SEH weighting arm can be set in five load steps from 10 to 20 daN. The range of the five load steps of the middle element ranges from 8 to 18 daN.

Due to the number of load settings the spinning process can be adjusted to suit even critical fibres.

Load position	Load Front element	Load Middle element	Load Rear element
1	10 daN	8 daN	10 daN
2	12.5 daN	10.5 daN	12.5 daN
3	15 daN	13 daN	15 daN
4	17.5 daN	15.5 daN	17.5 daN
5	20 daN	18 daN	20 daN

Setting the Load on Front, Middle and Rear Element

Load on front, middle and rear weighting element can be set in five stages. Setting can be activated by allen key SW3 1255 216.

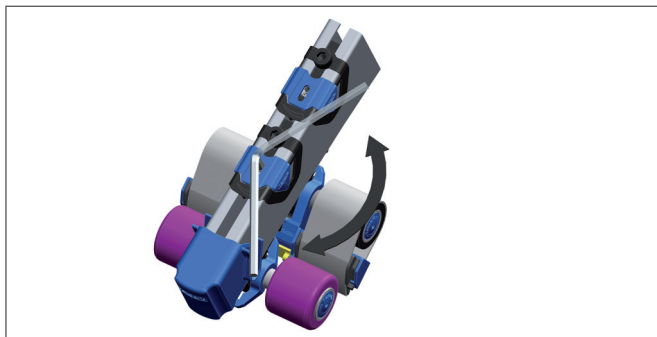
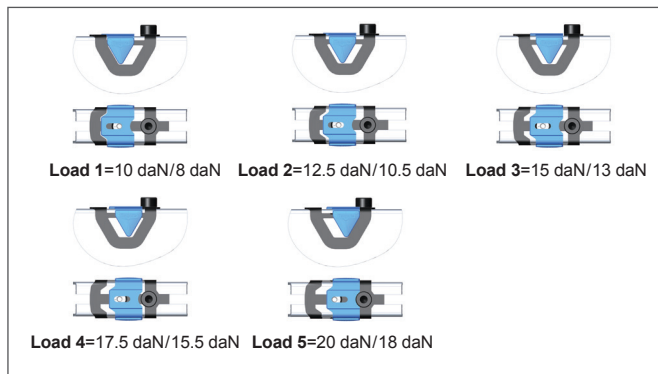


Fig. B: Load stages on front, middle and rear element of PK 2630 SEH weighting arm and their activation with allen key SW3 1255 216

Top Apron Cradles, Top Aprons and Distance Clips for PK 2630 SEH

Top apron cradles OH Ref.No.	Gauge Tw [mm]	Top aprons general designation	Basic equipment Dist. clips ¹⁾ with colour Ref.No
OH 2122-6020 689	70	PR 28	OLC-0017 705 lilac OLC-0964 119 white OLC-6006 661 light green
OH 2132-6023 011	70	PR 2839	OLC-0017 705 lilac OLC-0964 119 white OLC-6006 661 light green
OH 2132-6023 589	75	PR 2839	OLC-0017 705 lilac OLC-0964 119 white OLC-6006 661 light green
OH 2142-6020 803	70	PR 2813	OLC-0964 117 red OLC-0964 118 yellow OLC-0964 119 white
OH 2142-6022 727 ²⁾	75	PR 2813	OLC-0964 117 red OLC-0964 118 yellow OLC-0964 119 white

Fig. C: Range of top apron cradles, top aprons and distance clips for PK 2630 SEH weighting arms

Opening X*

Distance clip OLC		Top apron cradle		
Colour	Ref.No.	OH 2122 (short)	OH 2132 (short)	OH 2142 (medium)
red	0964 117	-	-	2.4
yellow	0964 118	-	-	2.8
lilac	0017 705	-	2.5	-
white	0964 119	2.8	2.9	3.5
light green	6006 661	3.1	3.1	-
grey	0017 627	3.3	-	-

Fig. D: OLC Distance clips in combination with Texparts top apron cradles
(The figures in the column give the values for the opening X in mm.)

¹⁾ One clip per cradle is required for each type of OH. These clips are not included in standard OH supply and have to be ordered separately.

²⁾ For use in weighting arms **PK 2630 SEH** (high load setting (15 daN) at the middle element recommended).

* See Chapter 10-34.

The following information (see figs. E-1 to E-3) is intended as a guide for the choice of distance clips to be used for various yarn counts.

Colour of Distance Clip		yellow	lilac	white	light green	grey	tur-quoise	black	orange	beige
OH 2122 Opening "X" in mm		–	2.5*	2.8*	3.1	3.3*	3.6	3.8	4.4	4.8
Ne	Nm									
6	10									
10	17									
20	34									
30	51									
40	68									
>40	>68									

Fig. E-1: Choice of distance clips in combination with Texparts top apron cradle OH 2122

Colour of Distance Clip		red	chrome yellow	yellow	lilac	white	light green	grey	tur-quoise	black
OH 2132 Opening "X" in mm		1.4	1.8	2.1	2.4	2.8	3.3	3.5	3.7	3.9
Ne	Nm									
6	10									
10	17									
20	34									
30	51									
40	68									
>40	>68									

Fig. E-2: Choice of distance clips in combination with Texparts top apron cradle OH 2132

* Basic supply of distance clips. Clips are not included in OH supply.

Colour of Distance Clip		red	chrome yellow	yellow	lilac	white	light green	grey	turquoise	black
OH 2142 Opening "X" in mm		2.4*	2.6	2.8*	3.2	3.5*	3.9	4.0	4.5	4.6
Ne	Nm									
6	10									
10	17									
20	34									
30	51									
40	68									
>40	>68									

Fig. E-3: Choice of distance clips in combination with Texparts top apron cradle OH 2142

WEIGHTING ARMS PK 2000 PLUS SERIES FOR SHORT STAPLE RING SPINNING MACHINES

The weighting arms incorporate the experience of many decades of market leadership in the development of drafting systems.

The standard drafting system with a PLUS



The Texparts PK 2000 Plus was developed for the individual market requirements of the Asian market.

Moreover the PK 2000 Plus will be applied on three-roller double-apron drafting systems on short staple ring spinning machines suitable for spinning pure cotton, man-made fibres or blends of both types up to 60 mm fibre length.

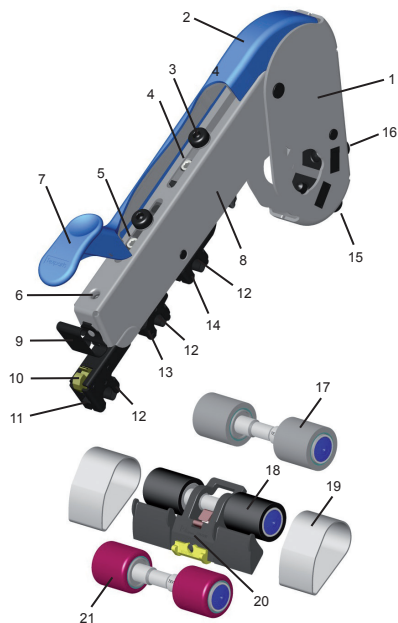
Advantages

- New lever construction, ergonomic adaptation of the handle
- Indestructible surface due to special powder coating, resistant against blows, dirt and sweat
- Top apron cradle concept with individual tensioning system
- Individual load adjustment
- Load indication via a colour scheme

Weightings Arm PK 2000 Plus Series

Weighting arm PK 2000 Plus Series is used for three-roller double apron drafting systems on short staple ring spinning machines.

PK 2000 Plus weighting arms are suitable for spinning pure cotton, man made fibres or blends thereof up to 60 mm length.



Weighting arm

- 1 Bracket
- 2 Lever
- 3 Screw and washer
- 4 Eccentric load selector of rear weighting element
- 5 Eccentric load selector of middle weighting element
- 6 Adjuster for parallelism of front top roller
- 7 Handle
- 8 Frame
- 9 Clearer roller holder
- 10 Eccentric load selector of front weighting element / Partial load relieve
- 11 Front weighting element
- 12 Saddle spring
- 13 Middle weighting element¹⁾
- 14 Rear weighting element
- 15 Height setting screw
- 16 Locking screw

Components

(not included in scope of supply)

- 17 Rear top roller
- 18 Apron top roller
- 19 Top apron
- 20 Top apron cradle
- 21 Front top roller

¹⁾ In the case of PK 2035 Plus the middle weighting element is 3.5 mm longer than on the PK 2025 Plus.

Standard Equipment for Weighting Arms PK 2000 Plus Series

Weighting arm	PK 2025 Plus	PK 2035 Plus
Top apron cradle and accessories		
OH 2022 (short) Tw 68.4, 75, 82.5	■	■
OH 62 (short) Tw 90	■	■
OH 2042 (middle) Tw 68.4, 75	■	■
OH 132 (middle) Tw 68.4, 75, 82.5	■	■
OH 122 (long) Tw 68.4, 75, 82.5	■	■
Accotex Aprons PR	■	■
Clips (1 per OH)	■	■
Rear and front top roller		
LP 1002 Tw 68.4, 75, 82.5, 90	■	■
Accotex cot ø28	■	
Accotex cot ø35		■
Apron top roller		
LP 1003 with special sleeve (standard) Tw 68.4, 75, 82.5, 90	■	■
LP 1002 (optional) with ME-480 cot ø25 Tw 68.4, 75, 82.5, 90	■	■

Draft Field Settings PK 2000 Plus Series

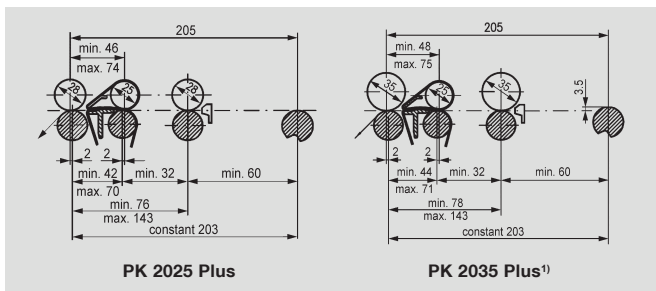


Fig.A: Draft field settings PK 2000 Plus series

To suit the different categories of fibre length various sizes of top apron cradle OH are available.

The size of the respective cradle used determines the front zone setting. The different types of top apron cradles OH, draft field settings and maximum fibre length will be found on the following pages.

PK 2035 Plus weighting arm is mainly used for spinning of longer staple fibres. It is designed for this purpose using rear and front top rollers with a diameter of 35 mm.

¹⁾ In the case of PK 2035 Plus the middle guide element is 3.5 mm longer than the one of the PK 2025 Plus.

Weighting Arms, Zone Settings and Maximum Fibre Length

Weighting arm	Top apron cradle	Bottom roller diameter ¹⁾			Draft field mm			Total draft field GF mm max.	Fibre length max. mm
		I	II	III	HF	VF min	VF common		
PK 2025 Plus-6020 720 PK 2025 Plus-6022 025	OH 2022	25/27	25/27	25/27	44	34	1)	143	45
	OH 62				44		1)		45
	OH 2042				53		1)		54
	OH 132				53		1)		54
	OH 122				68		1)		60
PK 2035 Plus-6021 304 PK 2035 Plus-6022 035	OH 2022	27/30	25/27	27/30	46	34	1)	143	45
	OH 62				46		1)		45
	OH 2042				55		1)		54
	OH 132				55		1)		54
	OH 122				70		1)		60

Table A: Summary of weighting arms PK 2000 Plus series for short staple drafting systems

¹⁾ Depends on the fibre to be spun, fibre length and roving twist.

Saddle Load

In the case of PK 2025 Plus weighting arms 6 different loads can be set for the front top roller using the eccentric load selector on the front guide arm. The load is indicated by the respective colour marking on the eccentric load selector:

The selectable loads on the front, middle and rear top rollers for the individual PK 2000 Plus weighting arms are given in fig. B (Weighting arms PK 2000 Plus and their roller loads).

To achieve good yarn quality, it is advisable to use the 2nd load stage (black/green - 15 daN) for the front top roller when processing cotton and blends thereof. The 3rd load stage of green (17 daN) offers greater flexibility and enhanced load pressure adjustment to suit the fibre material to be spun. Lower loads save lifetime of cots, aprons and bearings. Pure man-made fibres, hard- twisted rovings, and fine yarn counts may require the 4th load stage (green/red - 19 daN). The 5th load stage (21 daN) is mainly used when adapting compact systems to the weighting arm.

If the ring spinning machine hasn't been used for longer time and soft front top rollers are used, the load on the front element of PK 2025 Plus weighting arms can be set to the partial load stage (white - 9 daN) in order to prevent moiré effects.

Thanks to the increased number of load pressure setting options the spinning process can be adjusted perfectly to suit even critical fibres. If the OH 2042 (OH medium) is to process relatively long fibres or to spin fine yarn counts, the high load (14 daN) should be used at the apron top roller.

Weighting arm Ref. no.	Front top roller [daN]	Apron top roller [daN]	Rear top roller [daN]
PK 2025 Plus-6020 720 PK 2025 Plus-6022 025	(9) ¹⁾ - 13 - 15 - 17 - 19 - 21	10 - 14	12 - 16
PK 2035 Plus-6021 304 PK 2035 Plus-6022 035	(9) ¹⁾ - 13 - 15 - 17 - 19 - 21	10 - 14	12 - 16

¹⁾ Partial load

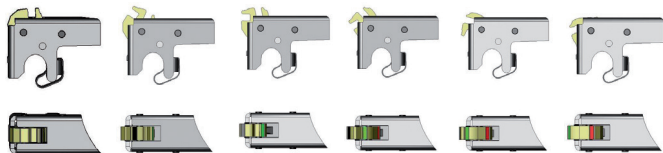
Fig. B: Weighting arms PK 2000 Plus and their saddle loads

Setting the Load on the Front Element

Setting load on the front guide arm can be set in 6 stages. Adjustment is effected by means of an eccentric load selector activated by setting wrench 0998 222. Load setting can be identified by code colour on eccentric load selector visible in cut out on front guide arm (see below figures).

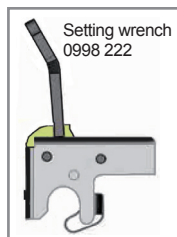
The following loads can be selected on the front element of PK 2000 Plus series weighting arms:

Load setting	Colour code on load selector	Load (daN)
Partial load	white	9
Load 1	black	13
Load 2	black/green	15
Load 3	green	17
Load 4	green/red	19
Load 5 (Maximum)	red	21



Partial load 9 daN white	Load 1 13 daN black	Load 2 15 daN black/green	Load 3 17 daN green	Load 4 19 daN green/red	Load 5 21 daN red
--------------------------------	---------------------------	---------------------------------	---------------------------	-------------------------------	-------------------------

Fig. C: Load stages on front weighting element of weighting arms PK 2000 Plus series



Partial load relieve

PK 2000 Plus weighting arms also allow partial load relieve on the front guide element. This becomes possible by setting the eccentric load selector to colour code "white" using the setting wrench 0998 222 (Fig. D: Partial load relieve). The partial load has a saddle load of 9 daN.

Fig. D: Partial load relieve at the front element

Setting the Load on the Rear and Middle Element

Two different loads are possible for the middle and rear element of the weighting arms PK 2025 Plus and PK 2035 Plus. They can be changed by turning the eccentric load selector with the hexagon screwdriver 0993 570 (Fig. E: load setting with hexagon screwdriver).

The load set can be identified by the position of the eccentric load selector.

A) Basic load I

The top edge of the eccentric load selector is in level with the upper edge of the element.

B) Maximum load II

The top edge of the eccentric load selector is lowered by dimension A (see fig. F: Load setting on the rear and middle element of PK 2000 Plus).

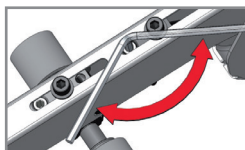
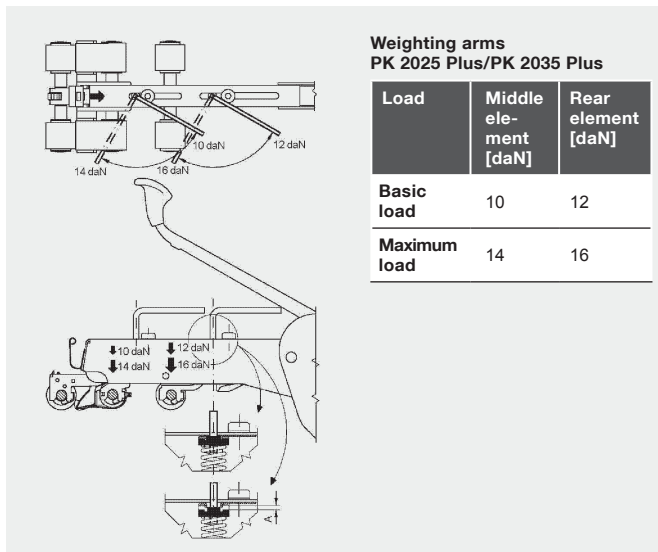


Fig E: Load setting with hexagon screwdriver 0993 570



**Weighting arms
PK 2025 Plus/PK 2035 Plus**

Load	Middle element [daN]	Rear element [daN]
Basic load	10	12
Maximum load	14	16

Fig. F: Load setting on the rear and middle element of PK 2000 Plus

Top Apron Cradles, Top Aprons and Distance Clips for PK 2000 Series

Top apron cradles OH Ref. No.	Gauge Tw [mm]	Top aprons general designation	Basic equipment Distance clips ¹⁾ Ref. No.	Colour
OH 2022-1247 888	68.4	PR 28		yellow lilac white
OH 2022-1247 887	75	PR 28		
OH 2022-1247 889	82.5	PR 28		
OH 62-0962 841	90	PR 32		
OH 2042-1250 133 ²⁾	68.4	PR 2813		red yellow white
OH 2042-1250 134 ²⁾	75	PR 2813		
OH 132-0963 671	82.5	PR 323		
OH 122-0963 495	68.4	PR 028		yellow white grey
OH 122-0963 500	75	PR 032		
OH 122-0963 511	82.5	PR 032		

Fig. G: Range of top apron cradles, top aprons and distance clips for PK 2000 Plus weighting arms

Opening X*

Distance clip OLC		Top apron cradle		
Colour	Ref.No.	OH 2022 (short)	OH 2042 (medium)	OH 122 (long)
red	0964 117	-	2.4	2.6
chrome yellow	6011 878	1.9	2.6	3.0
yellow	0964 118	2.2	2.8	3.4
lilac	0017 705	2.5	3.2	3.4
white	0964 119	2.8	3.5	3.7
light green	6006 661	3.1	3.9	4.0
grey	0017 627	3.3	4.0	4.2
turquoise	6006 662	3.6	4.5	4.5
black	0964 120	3.8	4.6	4.7
orange	6006 663	4.4	5.3	5.3
beige	0004 587	4.8	6.0	5.7
green	0004 588	5.5	6.6	6.2

Fig. H: OLC distance clips in combination with Texparts top apron cradles
(The figures in the column give the values for the opening X in mm.)

¹⁾ One clip per cradle is required for each type of OH. These clips are not included in standard OH supply and have to be ordered separately.

²⁾ For use in weighting arms of **PK 2000 Plus series** (maximum load setting (14 daN) at the middle element recommended).

* See Chapter 10-34.

The following information (see Figs. I-1 to I-4) is intended as a guide for the choice of distance clips to be used for various yarn counts.

Colour of Distance Clip		red	chrome yellow	yellow	lilac	white	light green	grey	tur-quoise	black
OH 2022										
Opening "X" in mm			1.9	2.2*	2.5*	2.8*	3.1	3.3	3.6	3.8
Ne	Nm									
6	10									
10	17									
20	34									
30	51									
40	68									
>40	>68									

Fig. I-1: Choice of distance clips in combination with Texparts top apron cradle OH 2022

Colour of Distance Clip		red	chrome yellow	yellow	lilac	white	light green	grey	tur-quoise	black
OH 2042										
Opening "X" in mm		2.4*	2.6	2.8*	3.2*	3.5*	3.9	4.0	4.5	4.6
Ne	Nm									
6	10									
10	17									
20	34									
30	51									
40	68									
>40	>68									

Fig. I-2: Choice of distance clips in combination with Texparts top apron cradle OH 2042

* Basic supply of distance clips. Clips are not included in OH supply.

Colour of Distance Clip	red	chrome yellow	yellow	lilac	white	light green	grey	tur-quoise	black
OH 132 Opening "X" in mm	2.5*	2.9	3.3*	3.3	3.6*	4.1	4.1	4.6	4.6
Ne	Nm								
6	10								
10	17								
20	34								
30	51								
40	68								
>40	>68								

Fig. I-3: Choice of distance clips in combination with Texparts top apron cradle OH 132

Colour of Distance Clip	red	chrome yellow	yellow	lilac	white	light green	grey	tur-quoise	black
OH 122 Opening "X" in mm	2.6	3.0	3.4*	3.4	3.7*	4.0	4.2*	4.5	4.7
Ne	Nm								
6	10								
10	17								
20	34								
30	51								
40	68								
>40	>68								

Fig. I-4: Choice of distance clips in combination with Texparts top apron cradle OH 122

* Basic supply of distance clips. Clips are not included in OH supply.

TEXPARTS WEIGHTING ARMS FOR COTTON ROVING FRAMES



Pneumatic drafting system
Weighting arms
Series PK 5000

Product data see:

Chapter 5, pages 18 - 27

Chapter 10, pages 75 - 85



Mechanical drafting system

Weighting arms

Series PK 1550

Product data see:

Chapter 5, pages 28 - 35

Chapter 10, pages 86 - 92



Mechanical drafting system

Weighting arms

Series PK 1580

Product data see:

Chapter 5, pages 36 - 43

Chapter 10, pages 93 - 100

GENERAL INFORMATION ON TEXPARTS SHORT STAPLE WEIGHTING ARMS

Sliver

The sliver counts normally used in mill practice are between approx. 3.4 and 5.0 ktex (Nm 0.30 - Nm 0.20). Sliver counts in this range guarantee ideal roving frame draft. Processing slivers of 3 ktex or finer on roving frame drafting systems is not recommended due to lacking of fibre cohesion and the resultant risk of faulty draft during sliver feed from can to drafting system.

The maximum sliver count may not exceed 6 ktex (Nm 0.17).

Draft Sizes

Total draft

The total draft on a four- or three-roller double apron drafting system is between 5 and 18 fold, a range of 5-12 fold providing the best results. Drafts higher than 12 fold are seldom employed as the total draft on a ring spinning machine should be as high as possible for yarn quality reasons. Drafts lower than 5 fold should not be applied. For the 4-roller double apron drafting system a draft of approx. 1.05 is used as a support for condensation between the roller pair I/1 and II/2.

Rear draft

The task of the rear draft is to tension the fibre material in the rear zone and draw it parallel. Rear drafts of between 1.12 and 1.18 are used in practice normally.

Draft Fields

Front zone

The front zone settings depend on the type of top apron cradle, the diameters of top and bottom rollers and the space required for the front zone condensers being used. The setting values will be found in figure F on page 10-80 (PK 5000), fig. C on page 10-89 (PK 1550) and fig. C on page 10-97 (PK 1580).

A precondition for good spinning results is the correct setting of the individual drafting system elements. A greater fibre mass of the sliver leads to increased friction of the fibres and thus effects control during the drafting process. Special attention must be given here to the selection of the correct width of opening X. Excessive control in the

front zone may lead to faulty draft or undrafted sections. Undrafted sections in the roving may, however, also be caused by a free gauge distance that is too narrow. If such drafting faults occur, the free gauge can be regulated by adjusting the front-hang of the front top roller or by setting the bottom roller distance. If this is not enough, even when high load is set on the front top roller, the front zone of the roving frame must be increased.

Rear roving guide

The rear roving guide C is to be positioned as close as possible to the rear pair of rollers (see figs. A/B). When selecting the rear roving guide, take the position and type of the roving-guide rail into account. If the aperture has been chosen correctly, any entangled sliver portion will be smoothed out and the fibre material will flow flawless.

Rear zone condenser

The rear zone condenser B is positioned in front of the double apron unit (see fig. A). The lower edge of the front aperture rests on the draft plane. Its task is to lightly condense the fibre material before it enters the front zone or the double apron unit and gently fold any flank fibres which may have spread outwards back into the sliver body. Make sure that the opening width of the rear zone condenser is not too small, otherwise faulty draft may occur.

The simplest and most reliable method of checking whether the passage aperture of the rear zone condenser has been selected correctly is shown in fig. B.

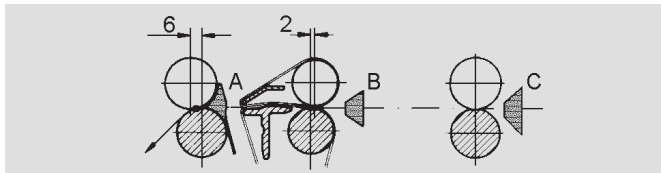


Fig. A: Fronthang of front top roller and backhang of middle top roller and alignment of roving guides resp. condensers

Condensers

In roving frame drafting systems, the task of the condensers is to evenly fold flank fibres back into the fibre material. The condenser should be neither too narrow, nor too wide in order to avoid possible faults in the draft process (see fig. B).

For reasons of process reliability, closed condensers are recommended for use on roving frames, with the exception of the front zone condenser. Favourable cross-section ratios for the delivery aperture of closed condensers (height x width) of 1:4 or 1:5 have proven their worth.

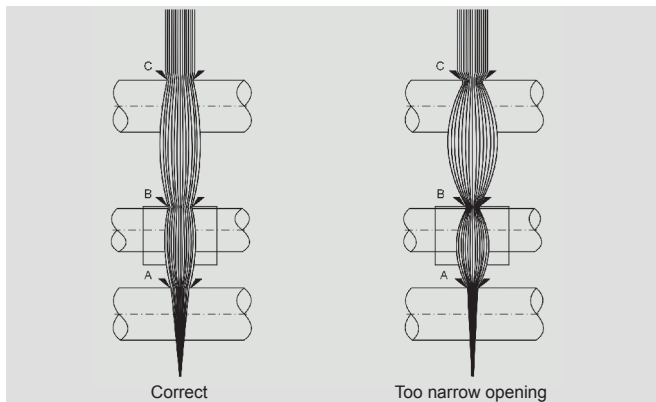


Fig. B: Correct opening width (left) and too narrow opening width (right) of condenser and rear roving guide

Front zone condenser

The use of front zone condensers in roving frame drafting systems has become generally accepted. Condensers, open at their bottom, have proven to be particularly useful.

The front zone condenser A condenses outspread flank fibres and returns them to the sliver (see fig. B). Subsequently the spinning delta is made smaller and roving breakages, lapping and fly formation are reduced. Particular care should be taken to precisely match the opening widths of the condensers not only to the roving count but also to the fibre characteristics (see table below). In-house trials should be carried out to do this.

Front zone condenser Ref. No.	Roving count	Delivery aperture width and colour of front zone condenser
KL-0998 282	680 tex to 400 tex or Nm 1.5 to 2.5 (Ne 0.9 to 1.48)	6 mm (yellow)
KL-0998 283	1000 tex to 680 tex or Nm 1.0 to 1.5 (Ne 0.6 to 0.9)	9 mm (colourless)
KL-0998 284 KL-0998 285	over 1000 tex or Nm 1.0 (Ne 0.6)	12 mm (black) or 16 mm (green)

Saddle Load

In roving frames, the load stage to be set on the weighting elements is determined by the type of fibre, the quantity of fibres and the amount of total draft.

Basically, the larger the quantity of fibres, the higher the load should be. For minor total drafts, comparatively high loads have proven their worth. The various loads set on the weighting elements are matched to their respective positions (rear, apron and front top rollers).

As a basic setting for all weighting elements we recommend the middle load stage. Depending on the respective requirements, a different load stage can be set at the individual elements.

The processing of man-made fibres and blends generally requires higher loads. Loads that are too low may lead to faulty drafting resulting in pull-through and undrafted sections. By comparison with the three-roller drafting system, lower front roller loads are used on four-roller drafting systems as only a tensioning draft of 1.05 is employed in the condensing zone in front of the front pair of rollers ($I/1 - II/2$).

Top Roller Cots

When freshly mounted and ground, the rear and front top roller cots in roving frames must have a diameter of 28 mm or 35 mm.

Quality and type of fibre material to be spun and running properties are decisive for the choice of cot. For top roller cots (rear, front - LP 1015), we recommend Accotex cots J 490 with a hardness of 83 Shore A. As apron top roller, the LP 1015 with cot (25 mm diameter) is used. Texparts recommends Accotex cots ME 480 with a hardness of 80 Shore A.



Grinding

Cot grinding intervals depend on


- cot quality
- type of fibre material
- finishing agents or other additives
- climatic conditions
- weighting pressure of the top roller
- top roller running time.

Grinding the spinning cots must not reduce the cot diameters by more than 3 mm. Within this diameter reduction range, no re-adjustment of the weighting arm height is necessary. The cot of the apron top roller LP 1015 may not be ground, as the top apron dimensions are matched to apron top rollers of fixed diameters.

Accotex Rear and Front Top Roller Cots for Roving Frames

Product Portfolio			Yarn Count (> = Ne)			Application
	Hardness Shore A	Colour	100% CO	CO / MMF	100 % MMF	Rear and front top rollers
Product						
J-476	76	blue	10	18	18	
J-490	83	grey	5	5	5	

Accotex Apron Top Roller Cots for Roving Frames

Product Portfolio			Yarn Count (> = Ne)			Application
	Hardness Shore A	Colour	100% CO	CO / MMF	100 % MMF	Apron top rollers
Product						
ME-480	80	black	■	■	■	

Bottom Apron Nose Bar

The bottom apron nose bar supports the bottom apron as it passes through the front zone. The recessed shape of the nose bar provides good fibre guidance and control through the double-apron unit.

The three different top apron cradles OH 5022, OH 5042 and OH 5245 are to be matched with the corresponding bottom apron nose bars.

WEIGHTING ARMS PK 5000 SERIES FOR COTTON ROVING FRAMES PNEUMATIC LOAD PRINCIPLE

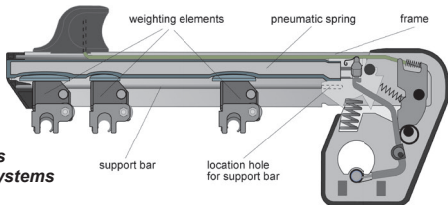
Weighting arms PK 5000 series are intended for three-roller and four-roller double apron drafting systems on cotton roving frames. They are suitable for spinning cotton, man-made fibres or blends thereof up to approx. 60 mm length.

PK 5000 comprises the models PK 5025 (top roller cot diameter 28 mm) and PK 5035 (top roller cot diameter 35 mm) as a three-roller double apron drafting system for spinning fibres according to the 3-clamping point process (figs. A, C).

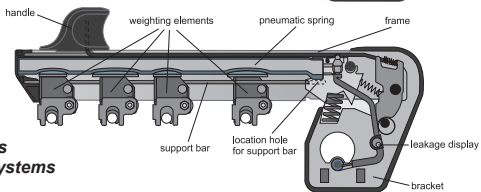
The four-roller double apron drafting system (PK 5025 and PK 5035) has an additional condensing zone between the first and second bottom roller - figs. B, D - (I/1 and II/2). By deliberately condensing the fibre material in this zone, a reduction of the spinning delta is achieved, thus improving the incorporation of the fibres into the roving. This results in the following important advantages:

- Reduced number of roving breakages (improved process reliability)
- Increased efficiency
- Greater package density of the roving frame bobbin thanks to the more compact roving.

The four-roller double-apron drafting system (weighting arms PK 5025-1260 632 and PK 5035-6010 014) has an additional break draft zone between the second and third bottom roller (II/2 and III/3), see figs B, E.



**Fig. A: PK 5000-series
for 3-roller drafting systems**



**Fig. B: PK 5000-series
for 4-roller drafting systems**

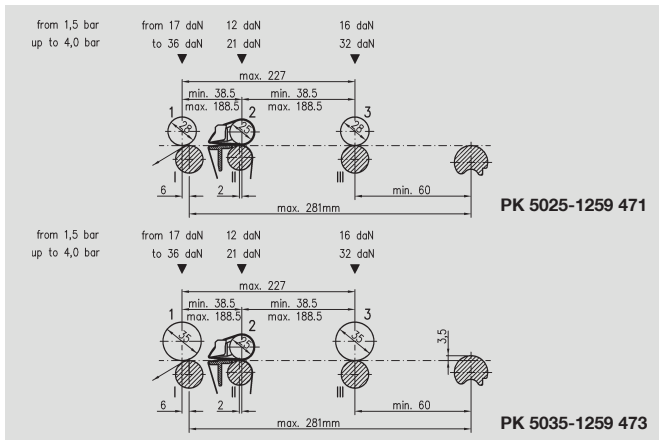


Fig. C: Draft field settings PK 5000 for 3-roller versions

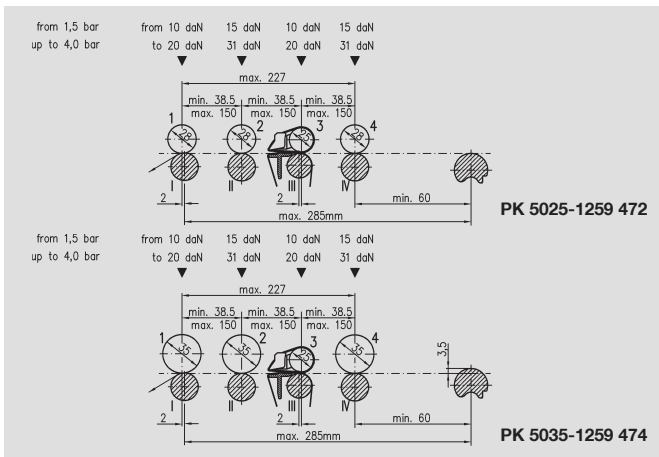


Fig. D: Draft field settings PK 5000 for 4-roller version

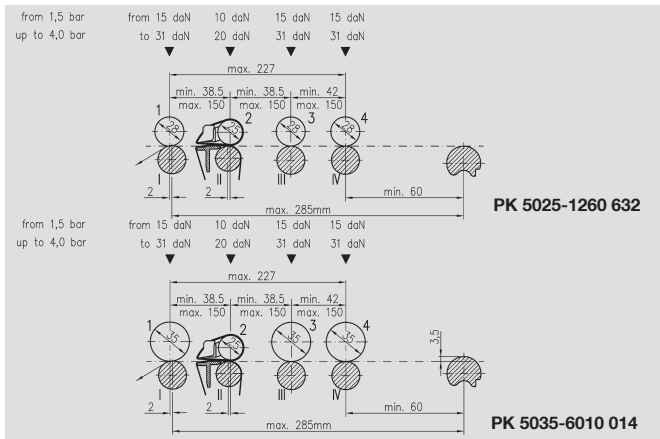


Fig. E: Draft field settings PK 5000 4-roller version PK 5025-1260 632 and PK 5035-6010 014

Standard Equipment for Weighting Arms PK 5000 3-Roller Version

Weighting arm	PK 5025-1259 471	PK 5035-1259 473
Top apron cradle and accessories		
OH 5022 (short) Tw 90, 100, 110	■	■
OH 5042 (middle) Tw 110	■	■
OH 5245 (long) Tw 110	■	■
Accotex Aprons PR	■	■
Clips (2 per OH)	■	■
Rear and front top roller		
LP 1015 Tw 90, 100, 110	■	■
Accotex cot Ø28	■	
Accotex cot Ø35		■
Apron top roller		
LP 1015 with Accotex cot ME 480 Ø25 Tw 90, 100, 110	■	■

Standard Equipment for Weighting Arms PK 5000 4-Roller Version

Weighting arm	PK 5025- 1259 472	PK 5035- 1259 474	PK 5025- 1260 632	PK 5035- 6010 014
Top apron cradle and accessories				
OH 5022 (short) Tw 90, 100, 110	■	■	■	■
OH 5042 (middle) Tw 110	■	■	■	■
Accotex Aprons PR	■	■	■	■
Clips (2 per OH)	■	■	■	■
Rear and front top roller				
LP 1015 Tw 90,100, 110	■	■	■	■
Accotex cot Ø28	■		■	■
Accotex cot Ø35		■		
Apron top roller				
LP 1015 with Accotex cot ME 480 Ø25 Tw 90, 100, 110	■	■	■	■

Weighting Arms, Zone Settings and Maximum Fibre Length

Front zone

The front zone settings depend on the fibre length, the type of top apron cradle, the diameters of top and bottom rollers and the space required for the front zone condensers being used. The setting values will be found in the following figures F and G.

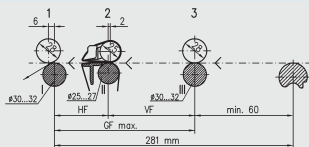
Weighting Arms, Zone Settings and Maximum Fibre Length

Weighting arm	Top apron cradle	Bottom roller diameter				HF	Draft field mm		Total draft field GF mm max	Fibre length max. mm		
		I	II	III	IV		VF min	VF common				
PK 5025-1259 472	OH 5022	30/32	30/32	25/27	30/32	49	40.5	1)	221	45		
	60					40.5	**					
PK 5035-1259 474	OH 5022	30/32	30/32	25/27	30/32	49	40.5	1)	221	45		
	60					40.5	**					
PK 5025-1259 471	OH 5022	30/32	25/27	30/32	-	49	40.5	1)	225	45		
	OH 5042					60	40.5	1)			225	60
	OH 5245					76	40.5	1)				
PK 5035-1259 473	OH 5022	30/32	25/27	30/32	-	49	40.5	1)	225	45		
	OH 5042					60	40.5	1)			225	54
	OH 5245					76	40.5	1)				
PK 5025-1260 632	OH 5022	30	30	30	30	49	38.5	1)	221	45		
	OH 5042					60	38.5	1)				
PK 5035-6010 014	OH 5022	30	30	30	30	49	38.5	1)	221	45		
	OH 5042					60	38.5	1)				

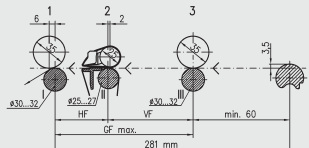
Fig. F: Summary of weighting arms PK 5000 series for short staple drafting system

** Extension of the usability range because of $GF_{max} = 225$ mm

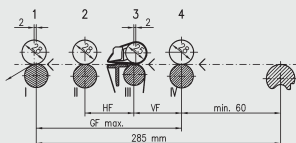
1) VF_{common} depends on fibre length and fibre material



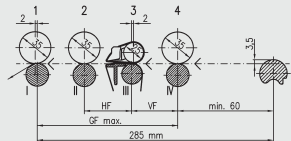
PK 5025-1259 471



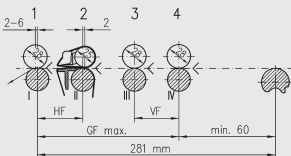
PK 5035-1259 473



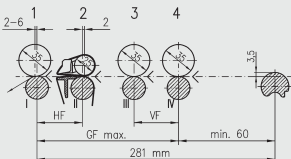
PK 5025-1259 472



PK 5035-1259 474



PK 5025-1260 632



PK 5035-6010 014

Fig. G: Draft field settings PK 5000 series

Saddle Load

The weighting arms are supplied with non-oiled compressed air via a central air supply system. This air supply system is installed on the roving frame as a T-distribution (see fig. H).

The load onto the top rollers can be set infinitely and centrally by the air pressure and thus, an optimum adjustment to the fibre material is possible.

Due to the pneumatic spring in the weighting arm the air pressure is transformed into the saddle load directly via the pressure plates of the individual weighting elements.

The setting is made with a filter valve in the pneumatic unit which incorporates an appropriate indicator instrument for this purpose.

The roller loads on rear, apron and front top rollers are interlinked at a fixed ratio. This ratio is determined by the pressure plate size of the weighting elements. When the working pressure is changed, this ratio remains constant.

The correlation between the set air pressure and the saddle load of all top rollers in the weighting arm is shown as a graph in fig. I.

In most applications, a working pressure of 2.4 - 2.6 bar is sufficient. In the case of man-made fibres or blends, a working pressure of 3.4 to 3.5 bar can be of advantage.

Partial load relieve

The weighting arm PK 5000 offers the possibility of central partial load relieve. This is applied to the top rollers due to the inherent elasticity of the pneumatic spring. It takes effect automatically when the roving machine is turned off by the main switch.

The partial load relieve has been selected in such a way that top roller cots are protected from permanent deformation (no moiré-effect!). After switching on the roving frame, the preset weighting pressure builds up automatically. When this pressure has been reached, the weighting arms are ready for operation.

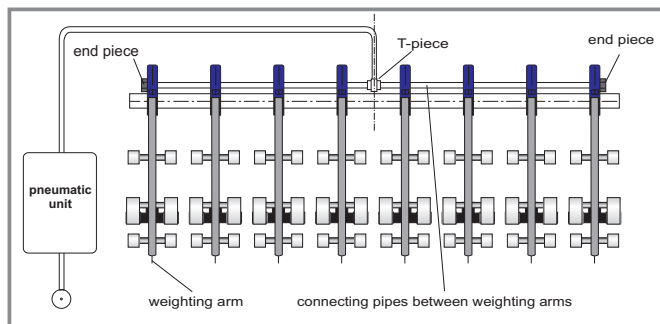
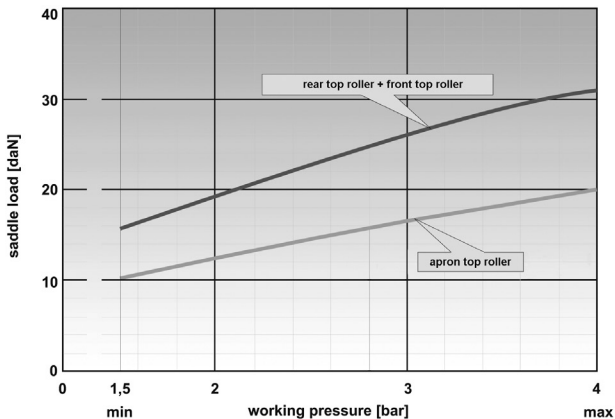


Fig. H: Air supply system for PK 5000 series

PK 5000 3-rollers



PK 5000 4-rollers

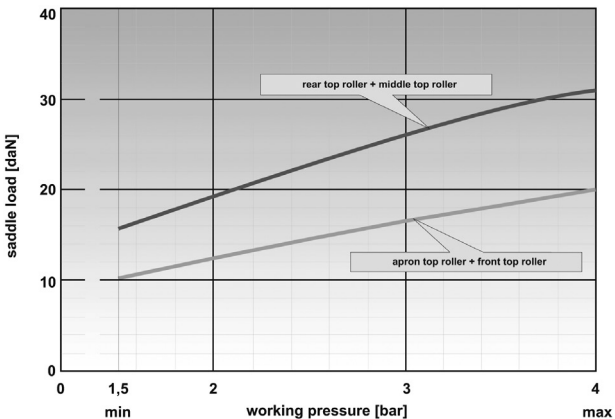


Fig. 1: Correlation between saddle load and working pressure for PK 5000 series

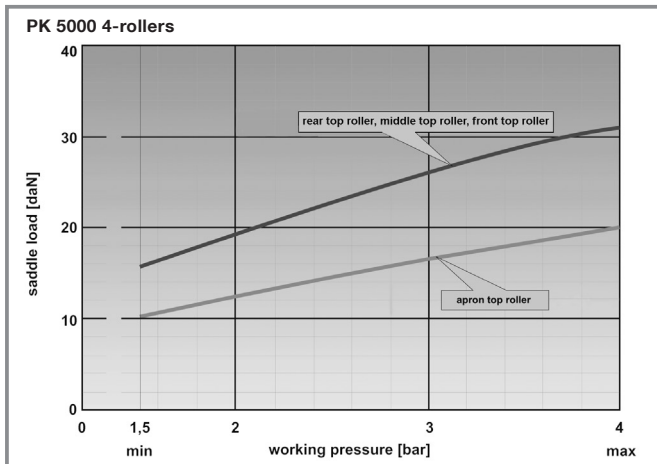


Fig. J: Correlation between saddle load and working pressure for PK 5000 series - models PK 5025-1260 632 and PK 5035-6010 014

Top Apron Cradle System

Weighting arms of PK 5000 series can be fitted with short staple cradle (OH 5022), medium staple cradle (OH 5042) or long staple cradle (OH 5245).

Top apron cradles OH for		Applications of the cradles
PK 5025-1259 471 PK 5035-1259 473	PK 5025-1259 472 PK 5035-1259 474 PK 5025-1260 632 PK 5035-6010 014	
OH 5022 short staple	OH 5022 short staple	Cotton and man-made fibres, pure / blends thereof up to approx. 45 mm max. fibre length.
OH 5042 medium staple	OH 5042 medium staple	Cotton and man-made fibres, pure / blends thereof up to approx. 54 mm max. fibre length.
OH 5245 long staple	-	Man-made fibres of up to approx. 60 mm max. fibre length.

Opening X

Distance clip OLC		Top apron cradle for PK 5000 weighting arms		
Colour	Ref.No.	OH 5022 (short)	OH 5042 (medium)	OH 5245 (long)
		Apron top roller 25 mm Ø	Apron top roller 25 mm Ø	Apron top roller 25 mm Ø
white	OLC-0964 104	3.4	3.5	3.6
grey	OLC-0964 105	3.8	3.9	4.1
black	OLC-0964 106	4.4	4.4	4.6
orange	OLC-0030 491	4.7	4.7	5.0
beige	OLC-0964 107	5.1	5.1	5.4
green	OLC-0964 108	5.9	5.9	6.4
blue	OLC-0964 109	8.9	8.9	8.9
brown	OLC-0964 110	11.1	11.1	11.1

Fig. K: Recommended distance clips OLC in combination with Texparts top apron cradles for PK 5000 weighting arms

Top Aprons for PK 5000

The dimensions of top aprons have been standardised and are determined by the type of OH top apron cradle (see fig. L).

Top apron cradles OH Ref. No.	Gauge Tw [mm]	Top aprons general designation	Top roller Type Ref. No.	Basic equipment Distance clips ¹⁾ Ref. No.
OH 5022-1259 297	110	PR 40	LP 1015-0025 228	↑ OLC-0964 104 OLC-0964 106 ↓ OLC-0964 108
OH 5042-1259 506	110	PR 4010	LP 1015-0025 228	↑ OLC-0964 104 OLC-0964 106 ↓ OLC-0964 108
OH 5245-1260 370	110	PR 4011	LP 1015-0025 228	↑ OLC-0964 104 OLC-0964 106 ↓ OLC-0964 108

Fig. L: Range of top apron cradles, top aprons and distance clips for PK 5000 weighting arms

1) Basic supply of distance clips.

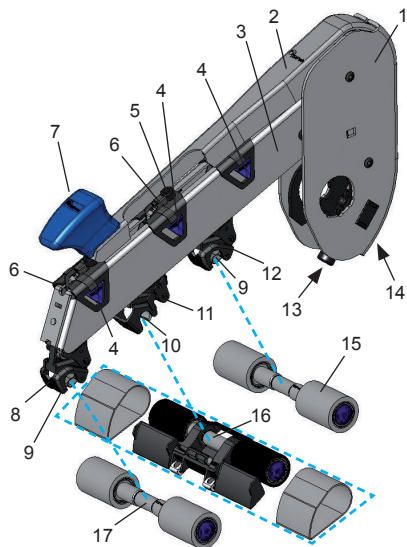
Distance clips are not included in standard OH supply.

WEIGHTING ARMS PK 1550 SERIES FOR COTTON ROVING FRAMES

Weighting arms PK 1550 series are mainly intended for 3-roller and 4-roller double apron drafting systems on roving frames. They are suitable for spinning cotton, man-made fibres or blends thereof up to approx. 60 mm length.

The PK 1550 weighting arm series comprises types PK 1550-6008 948 (28 mm Ø top rollers) and PK 1550-6008 949 (35 mm Ø top rollers) for 3-roller double apron drafting systems and types PK 1550-6008 947 and PK 1550-6017 295 (28 mm Ø top rollers), which are designed for 4-roller double apron drafting systems.

The 4-roller weighting arm PK 1550-6008 947 differs from the 3-roller version in having an additional condensing zone between the roller pairs I/1 and II/2 (see figs. A/B), whereas 4 roller version PK 1550-6017 295 has an additional middle draft zone between the roller pairs II/2 and III/3.



Weighting arm

- 1 Bracket
- 2 Lever
- 3 Frame
- 4 Load indicator
- 5 Screw
- 6 Eccentric load selector
- 7 Handle
- 8 Front weighting element
- 9 Saddle spring steel
- 10 Saddle spring plastic
- 11 Middle weighting element
- 12 Rear weighting element
- 13 Height setting screw
- 14 Locking screw

Components

- (not included in scope of supply)
- 15 Rear top roller 3
 - 16 Top apron cradle system
 - Apron top roller
 - Top apron cradle
 - Top apron
 - 17 Front top roller 1

By deliberately condensing the fibre material in this zone, a reduction in the spinning delta is achieved, thus improving the incorporation of the fibres into the roving. This results in the following important advantages:

- Reduced number of roving breakages (improved process reliability)
- Increased efficiency
- Greater package density of roving bobbin thanks to the more compact roving.

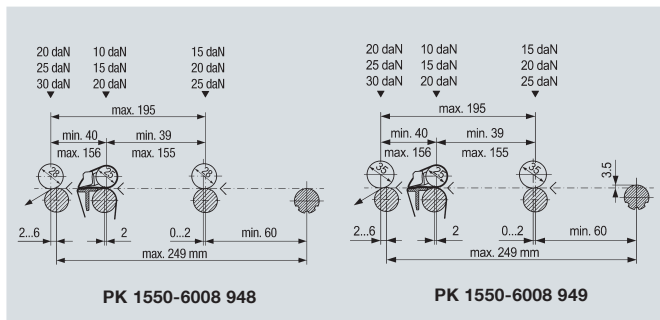


Fig. A: Drafting system PK 1550, 3-roller version

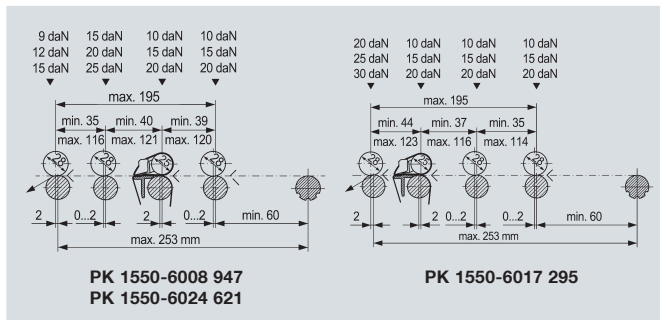


Fig. B: Drafting system PK 1550, 4-roller version

Standard Equipment for Weighting Arms PK 1550 Series

Weighting arm	PK 1550-6008 948	PK 1550-6008 949	PK 1550-6008 947	PK 1550-6024 621	PK 1550-6017 295
Top apron cradle and accessories					
OH 5022 (short) Tw 90, 100, 110	■	■	■	■	■
OH 5042 (middle) Tw 110	■	■	■	■	■
OH 5245 (long) Tw 100	■	■			
Accotex Aprons PR	■	■	■	■	■
Clips (2 per OH)	■	■	■	■	■
Rear and front top roller					
LP 1015 Tw 90, 100, 110	■	■	■	■	■
Accotex cot ø28	■		■		■
Accotex cot ø35		■			
Apron top roller					
LP 1015 with Accotex cot ME 480 Ø25 Tw 90, 100, 110	■	■	■	■	■

Weighting Arms, Zone Settings and Maximum Fibre Length

Weighting arm	Top apron cradle	Bottom roller diameter				Top roller diameter				Draft field mm			Overall draft field	Fibre-length max. mm
		I	II	III	IV	1	2	3	4	HF	VF min	VF common		
PK1550-6008 948	OH 5022				--					49	41	¹⁾	189	45
	OH 5042	30/32	25/32	30/32	--	28	25	28	--	60	41	¹⁾	189	54
	OH 5245									76	41	¹⁾	189	60
PK 1550-6008 949	OH 5022									49	41	¹⁾	189	45
	OH 5042	30/32	25/32	30/32	--	35	25	35	--	60	41	¹⁾	189	54
	OH 5245									76	41	¹⁾	189	60
PK 1550-6008 947	OH 5022	30/32	30/32	25/32	30/32	28	28	25	28	49	41	¹⁾	193	45
	OH 5042	30/32	30/32	25/32	30/32	28	28	25	28	60	41	¹⁾	193	54
PK 1550-6024 621	OH 5022	30/32	30/32	25/32	30/32	28	28	25	28	49	41	¹⁾	193	45
	OH 5042	30/32	30/32	25/32	30/32	28	28	25	28	60	41	¹⁾	193	54
PK 1550-6017 295	OH 5022	30/32	25/32	30/32	30/32	28	25	28	28	49	41	¹⁾	193	45
	OH 5042	30/32	25/32	30/32	30/32	28	25	28	28	60	41	¹⁾	193	54

Fig. C: Summary of weighting arms PK 1550 series for short staple drafting systems

¹⁾ VF_{common} depends on the fibre to be spun and fibre length.

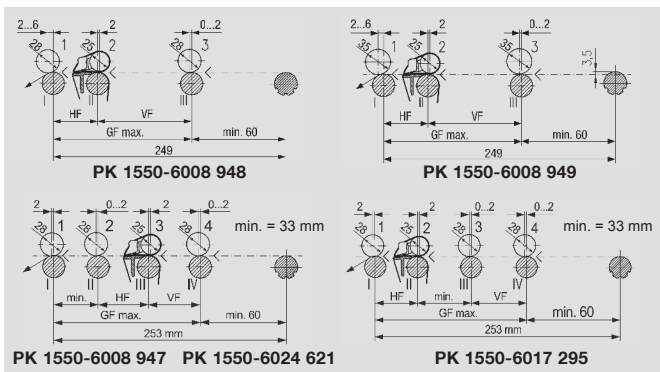


Fig. D: Draft field settings at PK 1550

The figure mentioned is the shortest possible distance of the bottom rollers depending on PK construction.

Load Setting

Load setting is effected by means of an eccentric load selector activated by a special wrench (fig. E). Three load stages can be set on each weighting element. The three different load settings can be identified by the position of the load indicator on top of the guide arm.

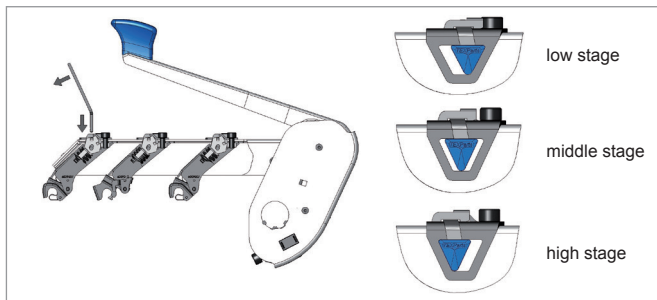


Fig. E: Load setting of weighting elements at PK 1550 and possible load stages of the individual elements

Load stages of individual elements PK 1550-6008 948, PK 1550-6008 949

Load stages	Front 1 PEL-6009 008	Middle 2 PEL-6009 010	Rear 3 PEL-6009 007
Low	20 daN	10 daN	15 daN
Middle	25 daN	15 daN	20 daN
High	30 daN	20 daN	25 daN

Load stages of individual elements PK 1550-6008 947, PK 1550-6024 621

Load stages	Front 1 PEL-6008 990	Middle 2 PEL-6009 007	Middle 3 PEL-6009 010	Rear 4 PEL-6009 009
Low	9 daN	15 daN	10 daN	10 daN
Middle	12 daN	20 daN	15 daN	15 daN
High	15 daN	25 daN	20 daN	20 daN

Load stages of individual elements PK 1550-6017 295

Load stages	Front 1 PEL-6008 990	Middle 2 PEL-6009 007	Middle 3 PEL-6001 010	Rear 4 PEL-6009 009
Low	20 daN	10 daN	10 daN	10 daN
Middle	25 daN	15 daN	15 daN	15 daN
High	30 daN	20 daN	20 daN	20 daN

Fig. F: Load stages of individual elements of PK 1550

Top Apron Cradle System

Weighting arms of PK 1550 series can be fitted with short (OH 5022), medium (OH 5042) or long (OH 5245) top apron cradles.

Top apron cradles OH for

PK 1550-6008 948 PK 1550-6008 949	PK 1550-6008 947 ¹⁾ PK 1550-6024 621 ¹⁾ PK 1550-6017 295 ¹⁾	Applications of the cradles
OH 5022 short	OH 5022 short	Cotton and man-made fibres, pure/ blends, of up to approx. 45 mm max. fibre length
OH 5042 medium	OH 5042 medium	Cotton and man-made fibres, pure/ blends, of up to approx. 54 mm max. fibre length
OH 5245 long	—	Man-made fibres of up to approx. 60 mm max. fibre length.

¹⁾ For fibre length of up to approx. 45 mm only.

Opening X

Distance clip OLC		Top apron cradle (with apron top roller 25 mm Ø)		
Colour	Ref. No.	OH 5022 (short)	OH 5042 (middle)	OH 5245 (long)
white	OLC-0964 104	3.4	3.5	3.6
grey	OLC-0964 105	3.8	3.9	4.1
black	OLC-0964 106	4.4	4.4	4.6
orange	OLC-0030 491	4.7	4.7	5.0
beige	OLC-0964 107	5.1	5.1	5.4
green	OLC-0964 108	5.9	5.9	6.4
blue	OLC-0964 109	8.9	8.9	8.9
brown	OLC-0964 110	11.1	11.1	11.9

Fig. G: Recommended distance clips OLC in combination with Texparts top apron cradles for PK 1550 weighting arms

Top Aprons for PK 1550

The dimensions of top aprons have been standardised and are determined by the type of top apron cradle OH and the diameter of the apron top roller used (see fig. H).

Top apron cradles OH Ref. No.	Gauge Tw [mm]	Top aprons general designation	Top roller Type Ref. No.	Basic equipment Distance clips ¹⁾ Ref. No.
OH 5022-6010 688	90	PR 40	LP 1015-1253 745	▲ OLC-0964 104
OH 5022-6004 092	100	PR 40	LP 1015-0025 227	↓ OLC-0964 106
OH 5022-1259 297	110	PR 40	LP 1015-0025 228	▼ OLC-0964 108
OH 5042-1259 506	110	PR 4010	LP 1015-0025 228	▲ OLC-0964 104 ↓ OLC-0964 106 ▼ OLC-0964 108
OH 5245-1260 370	110	PR 4011	LP 1015-0025 228	▲ OLC-0964 104 ↓ OLC-0964 106 ▼ OLC-0964 108

*Basic supply of distance clips. Clips are not included in standard OH supply.

Fig. H: Range of top apron cradles, top aprons and distance clips for PK 1550 weighting arms

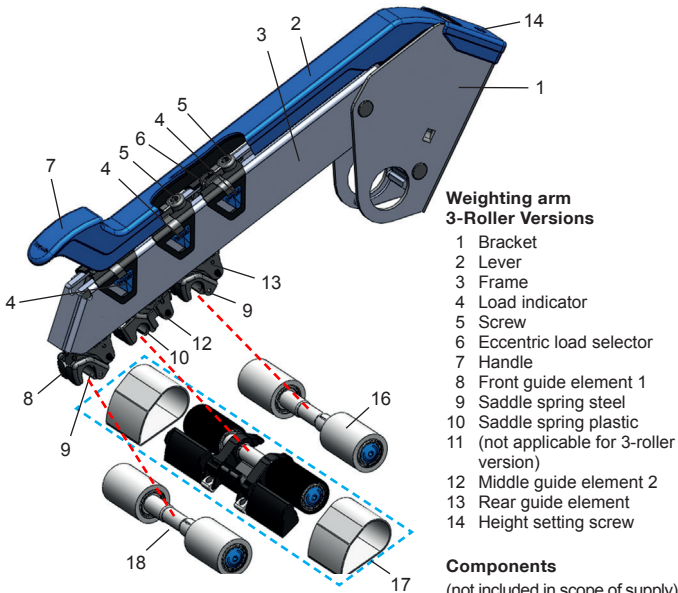
Top Roller Cots

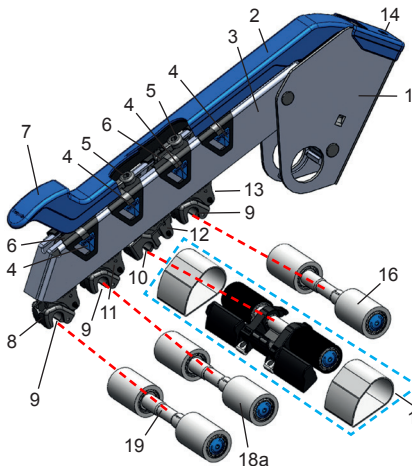
When freshly mounted and ground, the rear and front top roller cots of the PK 1550-6008 948, PK 1550-6008 947, PK 1550-6024 621 and PK 1550-6017 295 have a diameter of 28 mm, whereas PK 1550-6008 949 has a diameter of 35 mm.

Quality and type of fibre material to be spun and running properties are decisive for the choice of cot. For top roller cots (rear, front - LP 1015), a Shore hardness of 83° is common. For apron top roller LP 1015 Texparts recommends Accotex cots with a Shore hardness of 80°.

WEIGHTING ARMS PK 1580 SERIES FOR COTTON ROVING FRAMES

Texparts series PK 1580 weighting arms are mainly intended for 3- and 4-roller double apron drafting systems on Zinser roving frames. They are suitable for spinning cotton, man-made fibres or blends thereof up to approx. 60 mm length.



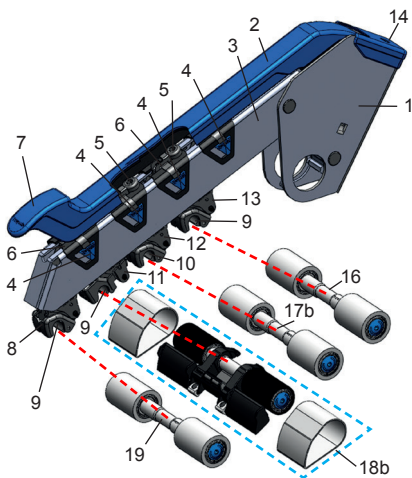


Weighting arm 4-Roller Version PK 1580-6030 393

- 1 Bracket
- 2 Lever
- 3 Frame
- 4 Load indicator
- 5 Screw
- 6 Eccentric load selector
- 7 Handle
- 8 Front guide element 1
- 9 Saddle spring steel
- 10 Saddle spring plastic
- 11 Middle guide element 2
- 12 Middle guide element 3
- 13 Rear guide element 4
- 14 Height setting screw

Weighting arm 4-Roller Version PK 1580-6030 392

- 1 Bracket
- 2 Lever
- 3 Frame
- 4 Load indicator
- 5 Screw
- 6 Eccentric load selector
- 7 Handle
- 8 Front guide element 1
- 9 Saddle spring steel
- 10 Saddle spring plastic
- 11 Middle guide element 2
- 12 Middle guide element 3
- 13 Rear guide element 4
- 14 Height setting screw



Equipment

(not included in scope of supply)

- 16 Rear top roller 4
- 17a Top apron cradle system
 - Apron top roller 3
 - Top apron cradle
 - Top apron
- 17b Middle top roller 3
- 18a Middle top roller 2
- 18b Top apron cradle system
 - Apron top roller 3
 - Top apron cradle
 - Top apron
- 19 Front top roller 1

The PK 1580 weighting arm series comprises types PK 1580-6030 302 (28 mm Ø top rollers) and PK 1580-6030 307 (35 mm Ø top rollers) for 3-roller double apron drafting systems and types PK 1580-6030 393 and PK 1580-6030 392 (both with 28 mm Ø top rollers), which are designed for 4-roller double apron drafting systems.

The 4-roller weighting arm PK 1580-6030 393 differs from the 3-roller version in having an additional condensing zone between the roller pairs I/1 and II/2 (see figs. A/B), whereas 4 roller version PK 1580-6030 392 has an additional middle drafting zone between the roller pairs II/2 and III/3 (see figs. A/B).

By deliberately condensing the fibre material in this zone, a reduction in the spinning delta is achieved, thus improving the incorporation of the fibres into the roving. This results in the following important advantages:

- Reduced number of roving breakages (improved process reliability)
- Increased efficiency
- Greater package density of roving bobbin thanks to the more compact roving.

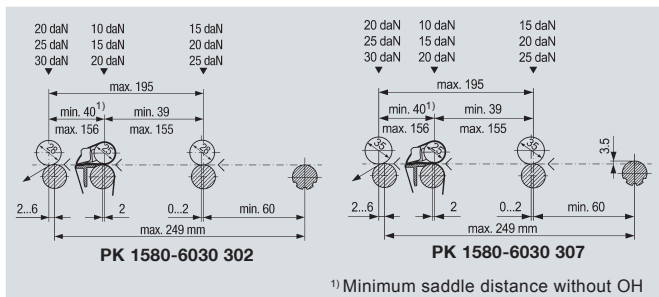


Fig. A: Drafting system PK 1580, 3-roller versions

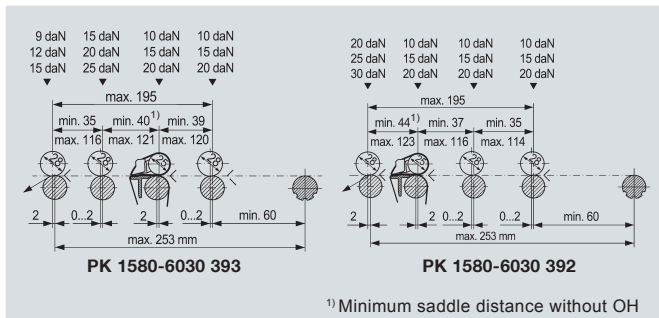


Fig. B: Drafting system PK 1580, 4-roller versions

Standard Equipment for Weighting Arms PK 1580 Series

Weighting arm	PK 1580-6030 302	PK 1580-6030 307	PK 1580-6030 393	PK 1580-6030 392
Top apron cradle and accessories				
OH 5022 (short) Tw 90, 100, 110	■	■	■	■
OH 5042 (middle) Tw 110	■	■	■	■
OH 5245 (long) Tw 110	■	■		
Accotex Aprons PR	■	■	■	■
Clips (2 per OH)	■	■	■	■
Rear and front top roller				
LP 1015 Tw 90, 100, 110	■	■	■	■
Accotex cot ø28	■		■	■
Accotex cot ø35		■		
Apron top roller				
LP 1015 with Accotex cot ME 480 Ø25 Tw 90, 100, 110	■	■	■	■

Weighting Arms, Zone Settings and Maximum Fibre Length

Weighting arm	Top apron cradle	Bottom roller diameter				Top roller diameter				Draft field mm			Overall draft field	Fibre-length max. mm
		I	II	III	IV	1	2	3	4	HF	VF min	VF common		
PK1580-6030 302	OH 5022									49	40	¹⁾	189	45
	OH 5042	30/32	25/32	30/32	--	28	25	28	--	60	40	¹⁾		54
	OH 5245									76	40	¹⁾		60
PK 1580-6030 307	OH 5022									49	40	¹⁾	189	45
	OH 5042	30/32	25/32	30/32	--	35	25	35	--	60	40	¹⁾		54
	OH 5245									76	40	¹⁾		60
PK 1580-6030 393	OH 5022	30/32	30/32	25/32	30/32	28	28	25	28	49	40	¹⁾	193	45
PK 1580-6030 392	OH 5022	30/32	25/32	30/32	30/32	28	25	28	28	49	40	¹⁾	193	45

Fig. C: Summary of weighting arms PK 1580 series for short staple drafting systems

¹⁾ VF_{common} depends on the fibre to be spun and fibre length.

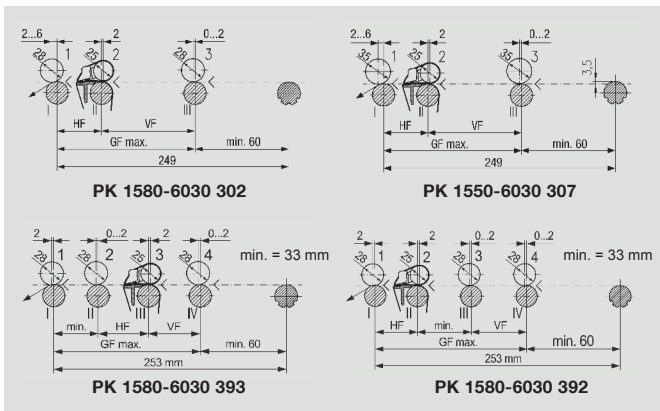


Fig. D: Draft field settings at PK 1580

The figure mentioned is the shortest possible distance of the bottom rollers depending on PK construction.

Load Setting

Load adjustment is effected by means of an eccentric load selector activated by a setting wrench 0998 222 (fig. E). 3 load stages can be set on each weighting element. The 3 different load settings can be identified by the load indicator, which is mounted at each element.

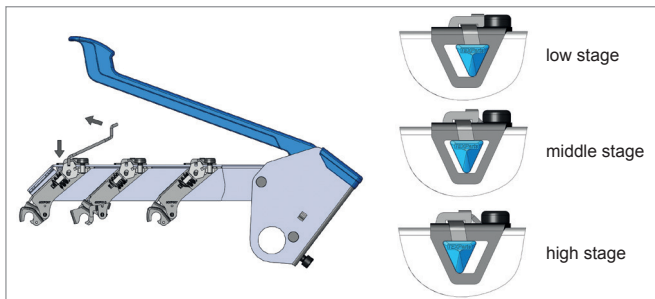


Fig. E: Load setting of weighting elements at PK 1580 and possible load stages of the individual elements

Load stages of individual elements PK 1580-6030 302, PK 1580-6030 307

Load stages	Front 1 PEL-6009 008	Middle 2 PEL-6009 010	Rear 3 PEL-6009 007
Low	20 daN	10 daN	15 daN
Middle	25 daN	15 daN	20 daN
High	30 daN	20 daN	25 daN

Load stages of individual elements PK 1580-6030 393

Load stages	Front 1 PEL-6008 990	Middle 2 PEL-6009 007	Middle 3 PEL-6009 010	Rear 4 PEL-6009 009
Low	9 daN	15 daN	10 daN	10 daN
Middle	12 daN	20 daN	15 daN	15 daN
High	15 daN	25 daN	20 daN	20 daN

Load stages of individual elements PK 1580-6030 392

Load stages	Front 1 PEL-6009 008	Middle 2 PEL-6009 010	Middle 3 PEL-6009 009	Rear 4 PEL-6009 009
Low	20 daN	10 daN	10 daN	10 daN
Middle	25 daN	15 daN	15 daN	15 daN
High	30 daN	20 daN	20 daN	20 daN

Fig. F: Load stages of individual elements of PK 1580

Top Apron Cradle System

Weighting arms of PK 1580 series can be fitted with short (OH 5022), medium (OH 5042) or long (OH 5245) top apron cradles.

Top apron cradles OH for

PK 1580-6030 302 PK 1580-6030 307	PK 1580-6030 393 ¹⁾ PK 1580-6030 392 ¹⁾	Applications of the cradles
OH 5022 short	OH 5022 short	Cotton and man-made fibres, pure/ blends, of up to approx. 45 mm max. fibre length
OH 5042 medium	—	Cotton and man-made fibres, pure/ blends, of up to approx. 54 mm max. fibre length
OH 5245 long	—	Man-made fibres of up to approx. 60 mm max. fibre length.

¹⁾ For fibre length of up to approx. 45 mm only.

Distance Clips OLC

We recommend (2 pcs. each per top apron cradle) the following distance clips for OH 5022, OH 5042 and OH 5245:

OLC-0964 104 (white) **OLC-0964 106 (black)** **OLC-0964 108 (green)**

Distance clips OLC are not included in the standard supply of the top apron cradle and have to be ordered as separate items.

Opening X

Distance clip OLC		Top apron cradle (with apron top roller 25 mm Ø)		
Colour	Ref. No.	OH 5022 (short)	OH 5042 (middle)	OH 5245 (long)
white	OLC-0964 104	3.4	3.5	3.6
grey	OLC-0964 105	3.8	3.9	4.1
black	OLC-0964 106	4.4	4.4	4.6
orange	OLC-0030 491	4.7	4.7	5.0
beige	OLC-0964 107	5.1	5.1	5.4
green	OLC-0964 108	5.9	5.9	6.4
blue	OLC-0964 109	8.9	8.9	8.9
brown	OLC-0964 110	11.1	11.1	11.9

Fig. G: Recommended distance clips OLC in combination with Texparts top apron cradles for PK 1580 weighting arms

Top Aprons for PK 1580

The dimensions of top aprons have been standardised and are determined by the type of top apron cradle OH and the diameter of the apron top roller used (see fig. H).

Top apron cradles OH Ref. No.	Gauge Tw [mm]	Top aprons general designation	Top roller Type Ref. No.	Basic equipment Distance clips ¹⁾ Ref. No.
OH 5022-6010 688	90	PR 40	LP 1015-1253 745	▲ OLC-0964 104
OH 5022-6004 092	100	PR 40	LP 1015-0025 227	↓ OLC-0964 106
OH 5022-1259 297	110	PR 40	LP 1015-0025 228	▼ OLC-0964 108
OH 5042-1259 506	110	PR 4010	LP 1015-0025 228	▲ OLC-0964 104 ↓ OLC-0964 106 ▼ OLC-0964 108
OH 5245-1260 370	110	PR 4011	LP 1015-0025 228	▲ OLC-0964 104 ↓ OLC-0964 106 ▼ OLC-0964 108

¹⁾ Recommended basic supply of distance clips (not included in standard OH supply).

Fig. H: Range of top apron cradles, top aprons and distance clips for PK 1580 weighting arms

Top Roller Cots

When freshly mounted and ground, the rear and front top roller cots of the PK 1580-6030 302, PK 1580-6030 393 and PK 1580-6030 392 have a diameter of 28 mm, whereas PK 1580-6030 307 has a diameter of 35 mm.

Quality and type of fibre material to be spun and running properties are decisive for the choice of cot. For top roller cots (rear, front - LP 1015), a Shore hardness of 83° is common. For apron top roller LP 1015 Texparts recommends Accotex cots with a Shore hardness of 80°.

TEXPARTS WEIGHTING ARMS FOR WORSTED RING SPINNING MACHINES



Pneumatic drafting system
Weighting arms
Series PK 6000
Product data see:
Chapter 5, pages 44 - 47
Chapter 9, pages 110 - 114



Mechanical drafting system
Weighting arms
Series PK 1660
Product data see:
Chapter 5, pages 48 - 51
Chapter 9, pages 115 - 118

GENERAL INFORMATION ON TEXPARTS LONG STAPLE WEIGHTING ARMS

Draft Ratios

Total draft

Total draft is determined by the type, composition and preparation of the fibre material to be processed. The total draft ranges recommended in fig. A have proven to be practical for the various types of material.

Nevertheless, applicable draft ratios must be determined by in-house spinning trials, using good roving quality and acceptable machine operating conditions.

Fibre material	Usual number of total drafts	Remarks
Wool	12-30	In contrast to French-type rovings, higher total drafts should be selected for twisted rovings.
Wool/man-made fibres	18-35	
Man-made fibres		In the case of blends, higher total drafts become possible as the proportion of man-made fibre increases.
Cut staple	20-40	
Filament tow	30-60	

Fig. A: Total draft range

Rear zone draft

In the case of 3-roller double-apron drafting systems using the slip-draft method (recessed roller), tension of the roving in the rear draft zone is necessary.

The roving should be well stretched when it enters the double apron unit. Rear drafts of 1.10 to 1.25 have proven to be best.

Draft Fields

Total draft field

Weighting arms for worsted ring spinning machines have a maximum total draft field length of $GF_{\max} = 223$ mm. The total draft field length can be determined approximately as follows:

GF = maximum fibre length + approx. 15 %

Rear zone setting

The rear zone setting (VF) basically depends on the maximum fibre length. In order to determine the rear zone setting, the standard dimension of the front zone HF (105 mm) must be subtracted from the total draft field length GF already determined.

VF = GF (calculated) - 105 mm (standard dimension)

With twisted roving, it may be necessary to set a higher rear zone distance. In this connection, we recommend in-house trials to be carried out.

Front zone setting

In the case of PK 6000 weighting arm, the front zone setting (HF) is determined by the top apron cradle system OH 6022. For the bottom roller diameters shown in fig. B on page 10-111, the front zone setting is always constant, amounting to 105 mm.

To support apron running properties, the apron top roller is set at a backhang of 2 mm. If front zone condensers are used, the front top roller is set at 7 mm fronthang (see fig. B on page 10-111). A smaller fronthang may be selected, if no front zone condenser or a special condenser is employed.

Saddle Load

PK 6000 has a pneumatic loading of the top rollers whereas weighting arms PK 1660 have a mechanical loading system.

The various load stages to be set can be seen in the corresponding product data on the following pages.

With fibre material that is difficult to draft - man-made fibres for instance - it may be necessary to increase the load to high load stage. Low load stage is to be used for fibre material with low fibre friction. If the yarn shows thick, undrafted portions at the front pair of rollers, the next-higher load stage should be set on the front top roller.

It is a feature of the system that the fibres are not nipped by the recessed apron top roller. Select the load stage which guarantees even, reliable running of top and bottom aprons. Excessive load on the apron top roller may reduce the depth of the apron top roller recess.

Distance Clips OLC

OLC distance clip Ref. No.	Colour	Opening X in mm with OH 6022	Opening X in mm with OH 2402	Opening X in mm with OH 554
OLC-0964 120	black	2.6	2.4	2.6
OLC-6006 663	orange	3.2	3.0	3.4
OLC-0004 587	beige	3.7	3.5	3.7
OLC-0004 588	green	4.1	4.0	4.1
OLC-0004 589	pink	5.6	5.4	5.6
OLC-0964 123	blue	8.0	7.5	8.0

Fig. B: Distance clips OLC and opening X

Top Rollers and Cots

In the weighting arms for worsted ring spinning machines, the rear and front top rollers with newly fitted cots should have 50 mm cot diameter after first grinding. Subsequent grinding of the cots may reduce the cot diameter of rear and front top rollers by a maximum of 3 mm. Within this range it is not necessary to readjust the height of the weighting arm or increase the loading.

On the PK 6000 the **system diameter of the apron top roller is 33 mm** and must be kept precisely on account of the specified apron length. For the PK 1660 and PK 1601 the diameter of the apron top roller is 48 mm.

Usually the top rollers are supplied without cots. If required, however, Texparts can also supply top rollers with cots fitted and ground. The cot quality can be specified by the customer. The cot diameters of top rollers with newly fitted cots are shown in fig. C on page 106.







The grinding cycles for the rear and front top rollers depend on:

- Cot quality
- Weighting pressure
- Type of fibre to be processed
- Production speed
- Finishing agents or other additives
- Climatic conditions
- Top roller operating time

In addition, in selecting the cot quality to suit the fibre, the cot should have accurately shaped edges, true, concentric running behaviour and a good-grip surface. For the rear and front top rollers we recommend cots with a Shore hardness between 80° to 85°, and for the apron top roller cots with a Shore hardness between 75° to 80°.

In the case of recessed apron top rollers, deviating fibre characteristics may require a variety of recess depths T. Ideal values must be determined by in-house spinning trials of the spinning mill, taking the fibre masses and fibre properties into account.


Accotex Front Top Roller Cots for Worsted Ring Spinning Machines

Product	Hardness Shore A	Colour	Yarn Count ($\geq Ne$)			Front top rollers
			100% WO	WO / MMF	100 % MMF	
J-460	60	burgundy	80			
J-463	63	lavender	60	60		
J-466	67	yellow	50	50		
J-470	70	green	40	40	40	
J-476	76	blue	30	30	30	
J-490	83	grey	5	5	5	

Accotex Rear Top Roller Cots for Worsted Ring Spinning Machines

Product	Hardness Shore A	Colour	Yarn Count ($\geq Ne$)			Rear and front top rollers
			100% WO	WO / MMF	100 % MMF	
J-490	83	grey	5	5	5	

Accotex Apron Top Roller Cots for Worsted Ring Spinning Machines

Product	Hardness Shore A	Colour	Yarn Count ($\geq Ne$)			Apron top roller cots recessed with various depths available
			100% WO	WO / MMF	100 % MMF	
ME-480	80	black				

Recessed Rollers

The recess depth of the apron top roller has a crucial effect on the intensity of fibre guidance and fibre control. It is an important instrument to achieve optimum yarn quality. Recess depths that are too low can impair both, yarn quality and running properties. In practice, the recess depths listed in fig. C below are used.

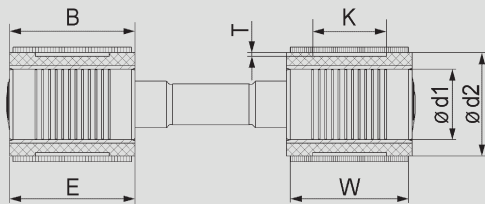
If high loads are applied, an adequate recess depth must be assured to compensate the flattening of the cot of the apron top roller.

Worsted ring spinning machines

Weighting arm	Top roller	d1	d2	b	E	W	K	T	Feed material
PK 1660	LP 1016	19	48	34	34	32	18	0.5	French-type roving approx. Nm 1.0 or finer
								1.0	French-type roving approx. Nm 1.0 or coarser
								1.5	Twisted roving approx. Nm 1.0 or finer approx. Nm 1.0 or coarser
PK 1660	LP 1017	19	48	40	40	40	20	0.5	French-type roving approx. Nm 1.0 or finer
								1.0	French-type roving approx. Nm 1.0 or coarser
								1.5	Twisted roving approx. Nm 1.0 or finer approx. Nm 1.0 or coarser
PK 6000	LP 1014	19	33	34	34	32	18	0.5	French-type roving approx. Nm 1.0 or finer
								1.0	French-type roving approx. Nm 1.0 or coarser
								1.5	Twisted roving approx. Nm 1.0 or finer approx. Nm 1.0 or coarser
PK 6000	LP 1015	19	33	40	40	40	20	0.5	French-type roving approx. Nm 1.0 or finer
								1.0	French-type roving approx. Nm 1.0 or coarser
								1.5	Twisted roving approx. Nm 1.0 or finer approx. Nm 1.0 or coarser

Fig. C: Recess depths of apron top rollers

Example of recessed top roller LP 1000 series



- $d1$ = diameter of outer ring [mm]
- $d2$ = diameter of cot [mm]
- B = width of cot [mm]
- E = width of outer ring or sleeve [mm]
- W = width of apron [mm]
- K = width of recess [mm]
- T = depth of recess [mm]

Fig. D: Apron top rollers with cot and outer ring dimensions

Bottom Apron Nose Bar

Long bottom apron system

The bottom apron nose bar supports the bottom apron as it passes through the front zone. The slightly convex shape of the nose bar provides good fibre guidance and control in the main drafting zone. The height of the nose bar generally is 2.5 mm above the drafting plane 1 (see fig. E). In special cases a higher nose bar position (with interchangeable washer 2) up to approx. 4 mm can be provided. A lower nose bar position (bar on the same level as the draft plane) may be more favourable in the case of fibres with high fibre friction.

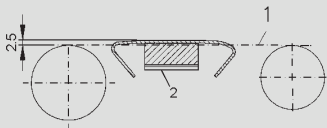


Fig. E: Draft plane with long bottom apron system

Condensers for Weighting Arms PK 6000 and PK 1660

Front zone condenser

The front zone condenser A is fitted in the main drafting zone between the apron unit and the front pair of rollers (see fig. F). The task of the condenser is to condense the fibre material coming from the apron unit and prevent the flank fibres from spreading out. The front zone condenser is suspended from the guide head of the front weighting element by means of a special securing spring.

Care must be taken not to restrict the front zone condenser's range of play, as this may lead to a drop in quality.

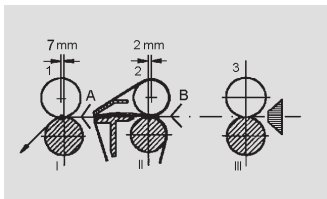


Fig. F: Fronthang of front top roller and backhang of middle top rollers and arrangement of condensers

Rear zone condenser

The rear zone condenser B is employed in the drafting system of worsted ring spinning machines (see fig. F). We recommend version KL-0997 469. This condenser is positioned ahead of the apron unit. Its shape is made in such a way that the roving is condensed when it runs into the following double-apron unit. The rear zone condenser is coupled to the rear roving guide and copies the latter's traverse motion.

The task of the rear zone condenser is to ensure that the roving only passes through the apron roller pair within the recessed portion of the upper apron roller. The traverse motion must be adjusted in such a way that this condition can be fulfilled reliably.

Front zone condenser Ref.No.	Gauge Tw in mm	Remarks	Symbol
KL-1248 233	75	Front zone condenser	
KL-1248 234	82.5	Pendulum secured by cheese-head screw	
KL-1246 243	75	Front zone condenser	
KL-1246 070	82.5	Pendulum with spring suspension	
Rear zone condenser Ref. No. KL-0997 469			

Fig. G: Condensers for weighting arms PK 6000 and PK 1660

WEIGHTING ARMS PK 6000 FOR WORSTED RING SPINNING MACHINES PNEUMATIC LOAD PRINCIPLE

The PK 6000 weighting arm is suitable for spinning wool, man-made fibres and blends of these materials as well as dry-spun bast fibres up to a fibre length of about 200 mm. The 3-roller double-apron drafting system works according to the slip-draft principle, with a recessed roller as the apron top roller. Depending on the type of preparation, twisted roving or French-type roving can be fed to the drafting system.

The weighting pressures on the top rollers are set infinitely and centrally using a non-oiled compressed air supply system. The latter is installed on the ring spinning machine in form of a ring main to which the weighting arms are connected. The ring main is supplied with controlled air pressure via a pneumatic unit. The saddle load of the top rollers depends on the pressure in the ring main and on the size of the pressure plates of the weighting elements. The PK 6000 weighting arm permits a central partial load relieve when the compressed air system is turned off.

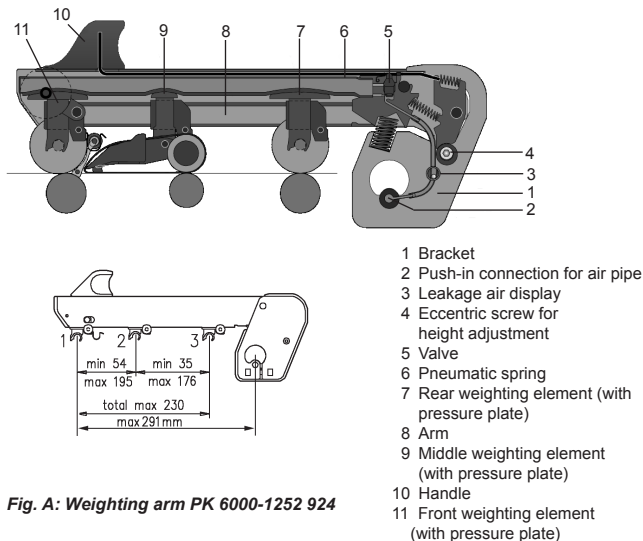


Fig. A: Weighting arm PK 6000-1252 924

Weighting Arms, Zone Settings and Maximum Fibre Length

Weighting arm	Top apron cradle	Bottom roller diameter			Draft field mm			Total draft field GF mm max	Fibre length max. mm
		I	II	III	HF	VF min	VF common		
PK 6000-1252 924	OH 6022	35/40	27/30.5	35/40	105	57 ¹⁾	²⁾	223	200

1) Without rear zone condenser the rear zone setting reduces to 45 mm at min.

2) Depends on fibre length and roving material.

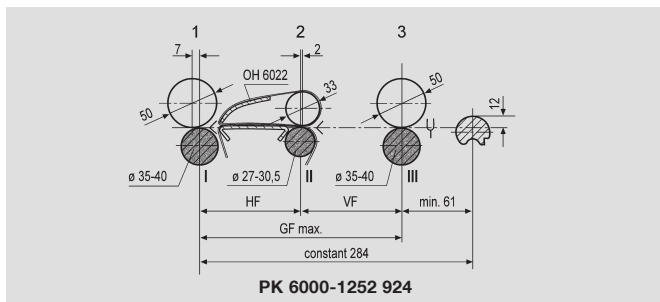


Fig. B: Draft field width and maximum fibre length at PK 6000

Saddle Load

The load onto the top rollers can be set infinitely and centrally through the air pressure and thus, an optimum adjustment to the fibre material is possible. Due to the pneumatic spring in the weighting arm the air pressure is transformed into the saddle load directly via the pressure plates of the individual weighting elements.

The roller loads on rear, apron and front top rollers are interlinked at a fixed ratio. This ratio is determined by the pressure plate sizes of the weighting elements. When the working pressure is changed, this ratio remains constant.

The correlation between the air pressure and saddle load of all top rollers in the weighting arm is shown as a graph in fig. C.

In most applications, an air pressure of 2.5 - 3.0 bar is sufficient. In the case of fibre materials with poor draft properties, a weighting pressure of 3.0 to 4.0 bar can be of advantage.

In the case of fibre material with low fibre friction or pressure-sensitive fibres, a weighting pressure of 1.5 to 2.5 bar is recommended. The fibres are not gripped by the apron top roller, which is designed as a recessed roller. As a result of the system design the air pressure for the apron top roller is lower than that of the rear and front top roller (see lower characteristic line in graph of fig. C).

Partial Load Relieve

The weighting arms PK 6000 offer the possibility of central partial load relieve. This is applied to the top rollers thanks to the inherent elasticity of the pneumatic spring. It takes effect automatically when the ring spinning machine is turned off with the main switch. The partial load relieve has been determined in a way, that it reliably prevents intrusion of the yarn twist into the draft field, and even soft top roller cots are protected from permanent deformation (no moiré effect!). After switch-on of the ring spinning machine, the preset air pressure builds up automatically. When this pressure has been reached, the weighting arms are ready for operation.

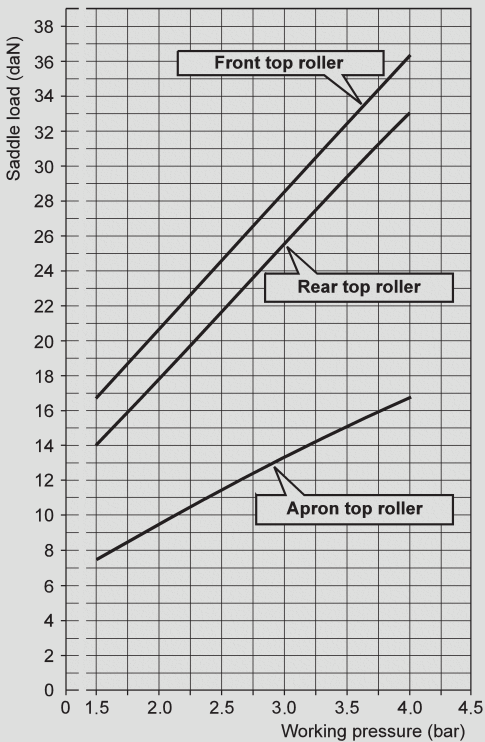


Fig. C: Correlation between saddle load and working pressure PK 6000

Top Apron Cradle System

The top apron cradle system OH 6022 is available for the weighting arm PK 6000. The design principle of the OH 6022 permits compensation of apron tolerances with its individualised apron tensioning system. For description of top apron cradle OH 6022 see chapter 6, pages 32 - 33.

The individual apron tensioning results simultaneously in low strain on the fibre and gentle fibre guidance during drafting.

The low-friction apron running ensures a low-drive torque and long apron service-life. The top aprons can be changed quickly and easily without removal of the top apron cradle system, even while still installed in the ring spinning machine. The contact pressure on the distance clip OLC is introduced directly by a special pressure spring.

Fig. D shows the top apron cradle OH 6022, the basic supply of distance clips, the appropriate apron top rollers and corresponding top apron designations.

Top apron cradles OH Ref. No.	Gauge Tw [mm]	Top aprons general designation	Top roller Type Ref. No.	Basic equipment Distance clips ¹⁾ Ref. No.	Colour
OH 6022	75	PR 3216	LP 1014 -1253 740	OLC-0964 120	black
				OLC-0004 587	beige
				OLC-0004 588	green
OH 6022	82.5	PR 4016	LP 1015 -1253 744	OLC-0964 120	black
				OLC-0004 587	beige
				OLC-0004 588	green

Fig. D: Top apron cradles and distance clips for PK 6000

¹⁾ Distance clips are not included in standard OH supply.

Mono-Clearer Roller System

To clean the front top roller and prevent laps, a mono-clearer roller system is available for the PK 6000 weighting arm (fig. E).

The mono-clearer roller system is guided by a swivelling, spring-loaded clearer roller holder and is slightly pressed against the top roller. Its exact parallel guidance ensures an excellent cleaning effect. It can be detached from the clearer roller holder for quick and easy cleaning.

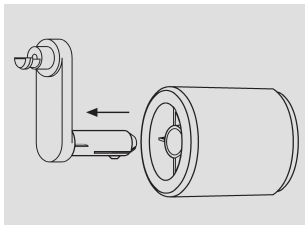
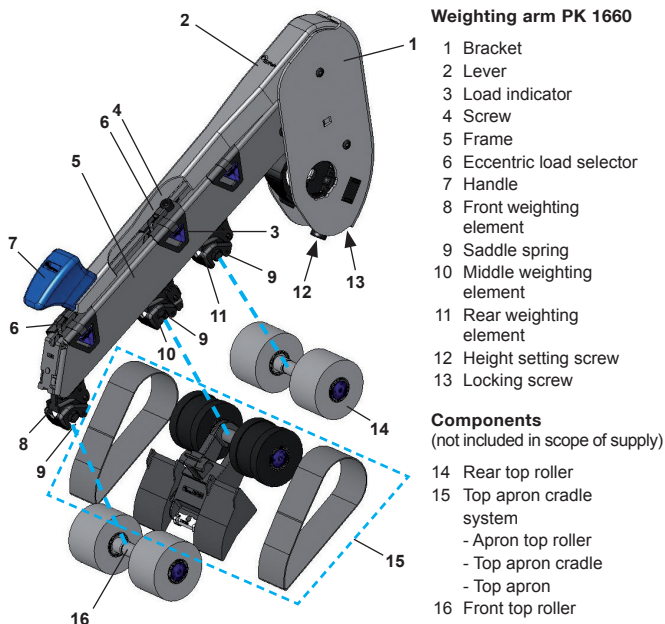


Fig. E: Mono-clearer roller system for PK 6000

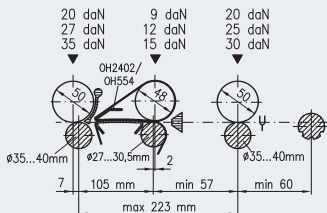
WEIGHTING ARMS PK 1660 SERIES FOR WORSTED RING SPINNING MACHINES

Texparts weighting arm PK 1660 series is mainly intended for 3-roller double-apron drafting systems on worsted ring spinning machines. PK 1660 weighting arm is suitable for spinning wool, man-made fibres or blends thereof as well as dry-spun bast-fibres up to approx. 200 mm length.

A recessed roller is used as apron top roller. Thus the drafting system works according to the slip-draft method having a single draft-field. Depending on the respective preparation method, twisted or French-type rovings can be processed on the drafting system.



Weighting Arms, Zone Settings and Maximum Fibre Length



PK 1660-6009 934

Fig. A: PK 1660 for worsted ring spinning machines

Draft Field Width and Maximum Fibre Length PK 1660

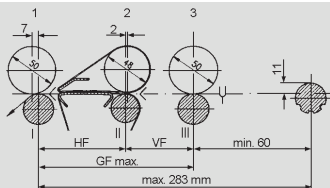
Weighting arm	Max. rear zone setting	Min. rear zone setting
PK 1660	118 mm	57 mm

In the case of twisted roving, a wider rear zone setting may be required. Therefore we recommend in-house trials to be carried out.

Weighting arm	Top apron cradle	Bottom roller diameter			Draft field mm			Total draft field GF mm max	Fibre length max. mm
		I	II	III	HF	VF min	VF com-mon		
PK 1660-6009 934	OH 2402	35/40	27/30.5	35/40	105	57 ¹⁾	2 ²⁾	223	200
	OH 554	35/40	27/30.5	35/40	105	57 ¹⁾	2 ²⁾	223	200

¹⁾ Without rear zone condenser the rear zone setting reduces to 45 mm at min.

²⁾ Depends on fibre length and roving material.



PK 1660-6009 934

Fig. B: Draft field width and maximum fibre length PK 1660

Saddle Load

PK 1660 weighting arm is fitted with three load stages on each weighting element (see fig. C). These are set by turning the relevant eccentric load selector. Experience has shown that the middle load stage at the rear and front top roller is adequate for most applications on PK 1660.

With fibre material that is difficult to draft – man-made fibres for instance – it may be necessary to increase load to high load stage. Low load stage is to be used for fibre material with low fibre friction. If the yarn shows thick, undrafted portions at the front pair of rollers, the next-higher load stage should be set on the front top roller.

It is a feature of the system that the fibres are not nipped by the recessed apron top roller. Select the load stage which guarantees even, reliable running of top and bottom aprons. Excessive loads on the apron top roller may reduce the depth of the apron top roller recess.

Load stages of weighting elements

Load indicator	Front 1 PEL-6009 005	Middle 2 PEL-6009 006	Rear 3 PEL-6009 008
low	20 daN	9 daN	20 daN
middle	27 daN	12 daN	25 daN
high	35 daN	15 daN	30 daN

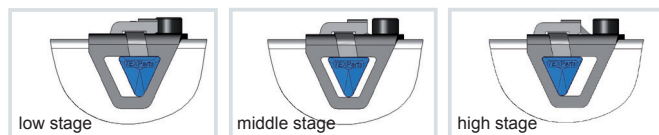


Fig. C: Load stages of weighting elements

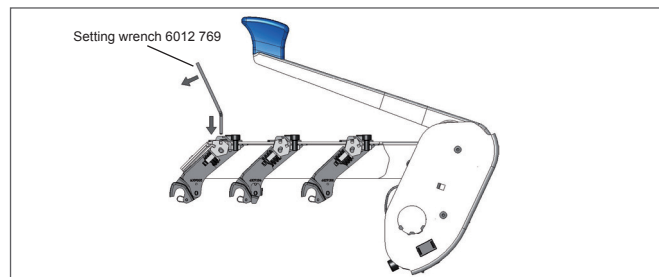


Fig. D: Load setting of weighting elements

Partial Load Relieve

PK 1660 weighting arm is equipped with a partial load relieve (see fig. E). Opening the lever to its first rest position activates the partial load relieve. If the ring spinning machine will not be used for longer time this feature allows the front top roller to be released to partial load of approx. 5 daN.

The partial load relieve has been determined in such a way that it reliably prevents intrusion of the yarn twist into the draft field, and top roller cots are protected from permanent deformation (no moiré effect!).

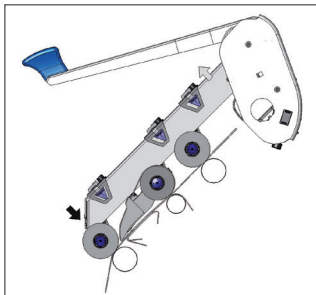


Fig. E : Partial load

Top Apron Cradles

PK 1660 weighting arm can be fitted with OH 2402 top apron cradles. For description of top apron cradles OH 2402 see chapter 6, pages 28 - 29.

The OH 2402 supersedes the previous cradle OH 554 and is totally compatible concerning types of top rollers and sizes of distance clips. Existing top rollers and distance clips from Texparts can be used further on without any problems on OH 2402, too.

As top aprons we recommend to use PR 3217 (gauge 75 mm) and PR 4017 (gauge 82.5 mm). Existing apron sizes with designation PR 32/5 (gauge 75 mm) and PR 40/5 (gauge 82.5 mm) respectively can be used further on with the OH 2402, if the backhang of the apron top roller can be set to 3 mm.

Fig. F shows the basic supply of distance clips, the appropriate apron top rollers and corresponding top apron designations.

Top apron cradles OH Ref. No.	Gauge Tw [mm]	Top roller Type Ref. No.	Top aprons general designation	Basic equipment Distance clips ¹⁾ Ref. No.	Colour
OH 2402	75	LP 1016-1256 711	PR 3217	OLC-0964 120 OLC-0004 587	black beige
OH 554	75	LP 1016-1256 711	PR 325	OLC-0004 588	green
OH 2402	82.5	LP 1017-1256 712	PR 4017	OLC-0964 120 OLC-0004 587	black beige
OH 554	82.5	LP 1017-1256 712	PR 405	OLC-0004 588	green

¹⁾ Distance clips are not included in standard OH supply

Fig. F: Top apron cradles and distance clips for PK 1660

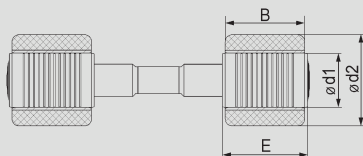
FOR ALL TEXPARTS DRAFTING SYSTEMS

SURVEY OF TOP ROLLER'S

OUTER RING AND COT DIMENSIONS

Rear and Front Top Rollers

Weighting arm	Top roller	d_1	d_2	B	E
Cotton ring spinning machines					
PK 2630 SEH	LP 1002	19	32	25/28	30
PK 2630 SE, PK 2655 SE	LP 1002	19	30	25/28	30
PK 2025 Plus	LP 1002	19	28	25/28	30
PK 2635 SE, PK 2665 SE	LP 1002	19	35	25/28	30
PK 2035 Plus	LP 1002	19	35	25/28	30
Cotton roving frames					
PK 5000, PK 1550	LP 1015	19	28/35	40	40
PK 1580	LP 1015	19	28/35	40	40
Worsted ring spinning machines					
PK 6000, PK 1660	LP 1015	19	50	30/32	34



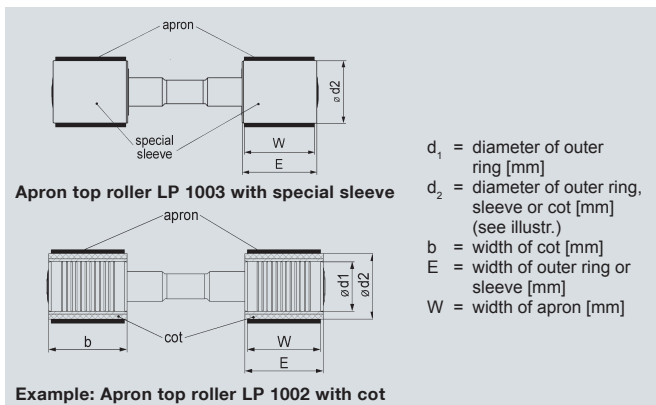
- d_1 = diameter of outer ring [mm]
- d_2 = diameter of cot [mm]
- B = width of cot [mm]
- E = width of outer ring [mm]

Example: Top roller LP 1002 with cot

Apron Top Rollers

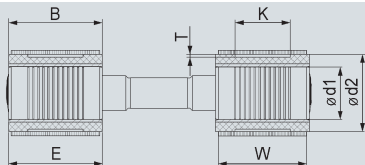
Weighting arm	Top roller	d_1	d_2	b	E	W
Cotton ring spinning machines						
PK 2600 SE series PK 2630 SEH	LP 1003 ¹⁾	-	25	-	30	28/32
	LP 1002	19	25	30/34	30/34	28/32
PK 2000 Plus series	LP 1003 ¹⁾	-	25	-	32	28/32
	LP 1002	19	25	30/34	30/34	28/32
Cotton roving frames						
PK 1500	LP 1017	19	25	40	40	40
PK 1550, PK 5000	LP 1015	19	25	40	40	40
PK 1580	LP 1015	19	25	40	40	40
Worsted ring spinning machines						
PK 6000	LP 1016	19	33	34	34	32
PK1660	LP 1016	19	48	34	34	32

¹⁾ Texparts supplies the apron top roller LP 1003 with special sleeves as standard.
If requested LP 1002 with cots can also be supplied as apron top roller.



Recessed Apron Top Rollers

Weighting arm	Top roller	d ₁	d ₂	b	E	W	K	T	Feed material
Worsted ring spinning machines									
PK 1660	LP 1016	19	48	34	34	32	18	0.5	French-type roving approx. Nm 1.0 or finer
								1.0	French-type roving approx. Nm 1.0 or coarser
								1.5	Twisted roving approx. Nm 1.0 or finer approx. Nm 1.0 or coarser
PK 1660	LP 1017	19	48	40	40	40	20	0.5	French-type roving approx. Nm 1.0 or finer
								1.0	French-type roving approx. Nm 1.0 or coarser
								1.5	Twisted roving approx. Nm 1.0 or finer approx. Nm 1.0 or coarser
PK 6000	LP 1014	19	33	34	34	32	18	0.5	French-type roving approx. Nm 1.0 or finer
								1.0	French-type roving approx. Nm 1.0 or coarser
								1.5	Twisted roving approx. Nm 1.0 or finer approx. Nm 1.0 or coarser
PK 6000	LP 1015	19	33	40	40	40	20	0.5	French-type roving approx. Nm 1.0 or finer
								1.0	French-type roving approx. Nm 1.0 or coarser
								1.5	Twisted roving approx. Nm 1.0 or finer approx. Nm 1.0 or coarser



Example of recessed top roller LP 1014

- d₁ = diameter of outer ring [mm]
- d₂ = diameter of cot [mm]
- B = width of cot [mm]
- E = width of outer ring or sleeve [mm]
- W = width of apron [mm]
- K = width of recess [mm]
- T = depth of recess [mm]

ACCOTEX COT TECHNOLOGY

General Remarks

Saurer Components as a specialist for spinning cots and aprons provides a wide range of cot qualities with different Shore hardness to suit the different mill and application requirements.

The requirements on a high performance cot in a ring spinning mill are as follows:

- Long durability
- Achievement of the highest yarn quality (evenness, imperfections and hairiness)
- Avoidance of lapping and felting behaviour
- Avoidance of knurled cylinder marks, particularly on soft cots
- Highest mechanical and dynamical stability
- Very good grindability
- Enhanced grinding cycle

The most influential factors of cot performance are:

- Fibre material being processed
- Load used on the top roller
- Surface finish and preparation
- Cot maintenance work
- Spinning room temperature and humidity.

Saurer Components recommends the supply of top rollers directly with cots ready ground, for immediate installation in the weighting arm. The cot quality can be specified by the customer. Saurer Components offers different cot qualities in a wide Shore hardness range.

The majority of cots used in today's spinning mills worldwide are Pressfit cots. Pressfit cots are an Accotex invention. Because of the aluminium tube they run virtually tension free, provide minimized internal stress to the rubber material and offer optimized rubber wall thickness.

Recommendations for Use

A survey of Accotex cots recommended for short and long staple spinning is given in chapter 3, pages 12 - 15 and in chapter 10, pages 34 - 36, 73 - 74 and 104 - 105.

Shore Hardness of Cots

The most commonly used hardness range for cots is from 60 to 83 Shore A. The Shore hardness of a cot influences the yarn quality and spinning behaviour. The selection for the right hardness is depending on the:

- Fibre material
- Yarn count
- Application and machine type
- Environmental conditions.

In general soft and medium soft cots in a range of 60 to 70 Shore A give a better yarn quality. But due to the softer material, these cots require a shorter grinding cycle.

In case cots with different Shore hardness should be differentiated the customary type of Shore accelerometer (according to DIN 53 505) can be used for testing the Shore hardness on rubber cots. Saurer Components offers the Accotex Shore Hardness Analyzer 20 or Accotex Shore Hardness Analyzer 35 for different outer diameters.

Cot Fitting

Pressfit cots can be used in case the roller tolerances (± 0.01 mm) permit the interference fit of the aluminum lined cots. It is essential that roller surfaces are free of foreign material and confirm to the above tolerances. Suitable cot presses are capable of exerting a force of approx. 5000 N (approx. 1100 lbs). Correct alignment and positioning of the cot on the roller is essential to prevent distortion of the aluminum core and movement on the roller. When fitting or removing the cots, make sure that no axial pressure is applied to the ball bearings of the top roller.

Absolute correspondence between the length-way axis of the roller and the axis of the pressure arm, and the roller must be securely held to prevent the roller being displaced by the load applied in pressing on. Space must be maintained between the cot and the support in order to prevent buckling of the cot. Provided these conditions are met, available presses can be used without trouble for mounting all Pressfit cots.

Cot Grinding

Yarn quality levels, end break rates and lifetime of cots depends on well-timed regrinding of top rollers. Over time the surface of the spinning cot suffers from:

- Ageing
- Brittleness
- Cracking
- Polishing
- Wear (abrasion)
- Influences of fibre finishes

Therefore, a frequent and preventive re-grinding of the top roller cots is absolutely necessary to compensate these effects.

Grinding Plan

Saurer Components recommend a preventing grinding according to a fixed grinding plan. Preventive grinding is important before cracks become obvious and before yarn quality drops down.

Benefits of a grinding plan

- The downtime during the grinding process is minimized
- The yarn quality parameters are kept consistent
- The productivity and consequently the profitability of the spinning mill is optimized
- Deterioration of the yarn values and the running behaviour of the cots is avoided
- Decrease of machine efficiency is counteracted.

In general the grinding interval of a top roller depends on the following:

- Cot Shore hardness and its compound composition
- Machine type (Ring, Compact, Core etc.)
- Position in the drafting arm
- Pressure of the drafting arm
- Width of traverse motion
- Fibre type
- Yarn count
- Speed of the machine (output)
- Draft
- Roving twist
- General quality demands of the spinning mill.

The right timing for re-grinding of spinning cots is reached if:

- The yarn quality level achieved is no longer acceptable
- The running behaviour of the spinning cots is no longer acceptable.

Each spinning mill has to determine its own standard for the grinding cycle. The key is the balancing between yarn quality, maintenance work and cot life time.

Handling comments for Grinding

Following has to be avoided in order to realize a proper maintenance:

- Too less material removal (not according to the wearing)
- A material removal of just 0.1 mm in diameter, but a wearing of e.g. 0.08 mm in radius
- Installation of newly delivered cots with an outer diameter higher than nominal size. E.g. 30.2 – 30.5 mm instead of 30.0 mm
- Installation of newly delivered cots with different outer diameter
- Canted mounting of the cot
- Poor maintenance of the grinding stone which causes grinder cuts
- Grinding cycles too long. E.g. re-grinding of a soft cot quality after 7 to 13 months
- Installation of newly delivered unmounted cots w/o grinding
- Well trained personnel at the roll shop

Grinding Recommendation

Improved yarn quality is a substantial competitive advantage for today's spinning mills. Accotex soft and medium soft cots are standard front cots accepted by the machine manufacturers, on both the regular and the compact spinning frames.

Improving yarn values (CV%, Thins, Thicks) requires a high quality soft cot; the performance of this cot however depends largely on the proper preparation of the cot surface.

For a good performance the cot needs the correct surface roughness. We recommend a value of Ra 0.8 - 1.0 μm . In special applications UV treatment of the cots surfaces can be suitable.

Following we want to give some general guidelines, how the best grinding results can be achieved for Accotex cots on some of the most commonly used types of grinding machines in the market using either a wide stone or a narrow stone.

Independent of the type of grinding machine, we suggest to ensure the following:

- The grinding stone is dressed and maintained properly.
 - The stone should be dressed with a diamond after every 1500 top rollers. Afterwards the stone surface has to be polished with a medium sand paper.
 - The stone must be cleaned every 15 minutes, using either compressed air or a soft metal brush.
- The cot surface after grinding is clean and free of grinding dust and grinder cuts.
- The cot has the correct surface roughness (Ra-value) after grinding.
 - Use a measuring device which is calibrated.
 - When the surface is cold, three single values should be measured around the circumference of the cot and should be averaged.
- With each grinding it is in general necessary to remove at least 0.3 mm in diameter in order to get a fresh rubber layer on the cot surface. If less material is removed surface cracks can occur after several grinding cycles.
- New cots will be delivered with a certain wall thickness tolerance. After mounting the new cots have to be buffed all to the same outer diameter.
- The freshly buffed cots should relax for approx. 24 hours before they will be used.
- Prior to a new installation of a spinning machine all new top rollers should be ground
- New top rollers should be ground after approx. 500 h running time
- Lower grinding limit by 27.0 mm in diameter on the new PK generation. No need for readjustment of the height of the weighting arm. The recommended cot diameters are mentioned in individual PK chapters.

Grinding Machine: Wide-Stone Type

- Semi automatic or fully automatic grinding machine
- Stone grain 80 or 120
- Stone porosity 14 or 10
- Cot diameter to be reduced by 0.3 mm for each grinding

The grinding results that should be achieved are:

To remove 0.3mm rubber in order to get a layer of fresh rubber to the surface.

To get a Ra-value between 0.8 - 1.0 μm measured on the cold surface.

Grinding intervals, 1 to 3 months for soft / medium soft cots and 4 to 5 months for hard cots, 7 – 15 days for softer cots on Air-Jet spinning.

To achieve the results most effectively, please proceed as follows:

Measure the outer diameter of the cot before grinding.

Grind the cot; the total contact time (time the cot is in contact with the stone surface) should be:

- for grinding stones with a grain of 120 and a porosity of 10:
Approximately 8 seconds for Accotex soft and medium soft cots, made up of 3 seconds grinding time and 5 seconds polishing time (we recommend to chose the feed 1 sec/0,1 mm material removal).
- For grinding stones with a grain of 80 and a porosity of 14:
approximate 10 seconds for Accotex soft and medium soft cots

Measure the outer diameter of the cot after grinding; it should be 0.3 mm smaller now, measured on the cold surface.

If less than 0.3 mm has been taken off, the machine has to be either reset (in case of computerized service) or the feeding wheel has to be adjusted by turning it to the right then grind and measure again.

If 0.3 mm diameter reduction has been achieved, please wait for the cot surface to cool down and measure the Ra-value of the surface.

The total contact time might have to be adjusted, in case a different stone type, stone condition etc. is been used. In this case, please proceed as follows:

- If the surface is smoother than Ra 0.8 μm , shorten the total contact time by reducing just the polishing time.
- If the surface is rougher than Ra 1.0 μm , lengthen the total contact time by extending just the polishing time.

Grinding Machine: Narrow-Stone Type

- Stone grain 80
- Stone porosity 14
- Cot diameter to be reduced by 0.3 mm for each grinding.

The grinding results that should be achieved are:

- ➔ To remove 0.3mm rubber in order to get a layer of fresh rubber to the surface.
- ➔ To get an Ra value between 0.8 - 1.0 μm measured on cold surface.
- ➔ Grinding intervals, 1 to 3 months for soft/medium soft cots and 4 to 5 months for hard cots, 7 – 15 days for softer cots on Air-Jet spinning.

To achieve the results most effectively, please proceed as follows:

- ➔ Measure the outer diameter of the cot before grinding.
- ➔ Grind the cot; the total contact time (time the cot is in contact with the stone surface) should be approximately 10 seconds for Accotex soft and medium soft cots, made up of 5 seconds grinding time and 5 seconds polishing time.
- ➔ Measure the outer diameter of the cot after grinding; it should be 0.3 mm smaller now, measured on the cold surface.
If less than 0.3 mm has been taken off, the machine has to be reset.
- ➔ If 0.3 mm diameter reduction has been achieved, please wait for the cot surface to cool down and measure the Ra-value of the surface.
- ➔ The 10 seconds contact time might have to be adjusted, in case a different type of grinding stone, etc. is been used. In this case, please proceed as follows:
 - If the surface is smoother than Ra 0.8 μm , shorten the total contact time by reducing just the polishing time.
 - If the surface is rougher than Ra 1.0 μm , lengthen the total contact time by extending just the polishing time.

Cots and Aprons Storage

To guarantee the optimal product behavior Accotex Cots and Aprons must be stored under following conditions:

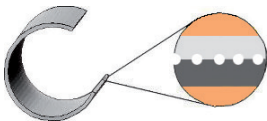
- under moderate temperature of 20 - 30 °C and a relative humidity of 40 - 60%
- in closed original boxes without additional pressure
- without the influence of light, heat and ozone
- un-mounted Accotex Cots should be stored no longer than for one year
- mounted and smooth buffed cots should be stored in an upright position no longer than for three months
- Accotex Aprons should be stored no longer than for six months

ACCOTEX APRON TECHNOLOGY

Accotex High Quality Aprons are distinguished by:

- Highest Compound Technology & High Tech Chemistry
(Raw Material Selection, sophisticated and consistent Mixing Technology)
- Stable and consistent construction
- Precise dimension
- Lowest possible slippage tendency
- Dimensional stability
- Good friction properties and running behavior over whole life - e.g. no vibration, no stress cracking
- Good flexibility
- Sufficient resistance to all popular fibre dressings, colors and greases
- Trouble free processing of all common fibres under different climate conditions
- Superior life cycle for all common fiber types
 - Less breakages - less downtime of single spindles
 - Less machine stand stills or interruptions - higher efficiency

Close tolerance of inner layer and outer jacket as well as a perfect and exact position of the cord reinforcement prerequisite a high quality spinning apron. Rubber compound of outer jacket and inner layer are responsible for quality, durability and running behaviour of a high performance apron.



The dimensions of the bottom aprons to be used depend on the design of the substructure of the draft system. In practice, two types of substructure are most common:

- long bottom apron system. Bottom aprons are guided and pre-tensioned by a tensioning link
- short bottom apron system. Bottom aprons are guided by specially designed bottom apron nose bars, no tensioning link is provided.

The Accotex recommendation of use on the following page shows the available apron qualities for single applications.

Regarding the use of Accotex aprons in various spinning processes we recommend the following types:

Product Portfolio		Short Staple Spinning		Twisting
		Roving	Ring Spinning	
Accotex Apron	Colour	Top and bottom apron	Top and bottom apron	Sleeve
NO-78210G	grey/green	■	■	
TW-450X	grey/grey			■

Product Portfolio		Combing	Long Staple Spinning		
			Roving	Finisseur	Ring Spinning
Accotex Apron	Colour	Combing apron	Top and bottom apron	Top and bottom apron	Top and bottom apron
NO-78210G	grey/green		■	■	■
NO-78210*X	grey/green	■		■	
972	red/red	■			

Product Portfolio			Air Jet Spinning	
Accotex Apron	Colour	Fibre	Top apron	Bottom apron
NO-4970 KN	grey/green	CO, MMF, Blends	■	■
NO-9670 KN	black/green	PES, PES/CO Blends		■

Aprons available in endless and skived form.
 Apron thickness 0.9, 1.0, 1.1, 1.2, 1.4, 1.65 mm.
 Ring spinning aprons with knurled inside available with
 72.5, 76.3 and 79.0 mm inside diameter.

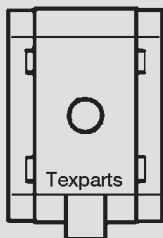
TEXPARTS BOTTOM ROLLER BEARINGS

Application

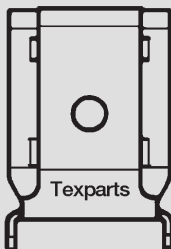
Texparts bottom roller bearings are being installed in ring spinning machines, draw frames and roving frames. These Texparts bearing units are fitted with precision-made needle bearings with a high-load-bearing capacity. The two lateral flanges of the inner ring have a knurled surface and provide effective protection against the intrusion of fibres.

The glass-fibre reinforced synthetic cage with the cage ends connected by a fitting groove ensures running characteristics like those of a solid cage.

Fixing of the outer ring in the roller stand can be carried out as standard by means of a fixing cap with either centre-guide or side lugs. Texparts bottom roller bearings are being supplied ready-greased with Texparts grease TG 5, or ungreased on customers' demand. See chapter 9, page 4 for details on relubrication.



Bottom roller bearing with
central guidance



Bottom roller bearing with
lateral guidance

TEXPARTS CONVERSION PLUS

Conversion Plus is the future-oriented Texparts' concept for the modernization of ring spinning machines. It comprises individual modules, which can be selected and combined to fulfill the various application requirements.

In principle Conversion Plus was conceived for the modernization of the spindle and drafting system areas.

The installation of a modern drafting system with higher drafts and a better drafting accuracy, combined with the utilization of highly efficient high speed spindles, will offer decisive advantages to the spinning mill:

- Improvement of the yarn quality
- Increase of spindle speed and production output
- Reduction of energy consumption.

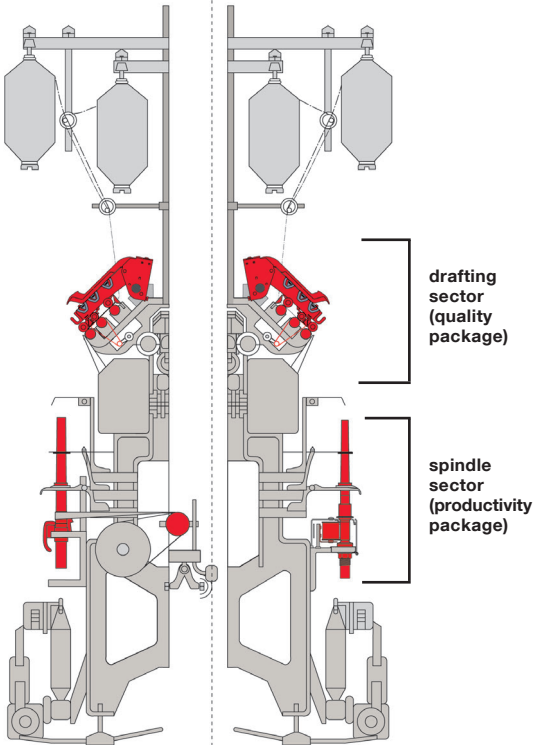
An additional advantage of the Conversion Plus principle is the fact that for the modernization of ring spinning machines no constructional changes of the existing building conditions on site are required. The machine inside of the spinning hall does not have to be moved during modernization.

With Conversion Plus machines are modernized successively, which means that there will be very little interference with the production running on other machines in the spinning hall.

MODERNIZATION OF RING SPINNING MACHINES

The modernization of ring spinning machines consists of 2 individual building blocks:

1. the modernization of the **spindle sector** (quality package)
2. the modernization of the **drafting sector** (productivity package)



1. THE MODERNIZATION OF THE SPINDLE SECTOR

The employment of flexible tensioning and adjustable spindles with small wharve diameters makes higher spindle speeds possible without increasing the rotation speed of the frame's main drive shaft (thus saving energy). The low-vibration running and excellent damping properties of Texparts spindles also have a positive influence on the ends down rate.

The installation of new, high-quality spinning rings enables the top speeds made possible by Texparts spindles to be exploited to the full.

A considerable saving in maintenance can also be achieved by the fact that these rings can be centred on the spindle.

2. THE MODERNIZATION OF THE DRAFTING SECTOR

Renewing the drafting system within the framework of the modernization of a ring spinning machine is of prime importance in improving yarn quality. The following options exist:

- Fitting new parts to the weighting arms (i.e. exchanging top apron cradles, rear and front top rollers)
- Installing new weighting arms
- Replacing the fluted rollers (rear and front bottom rollers)
- Replacing the knurled rollers (bottom apron rollers).

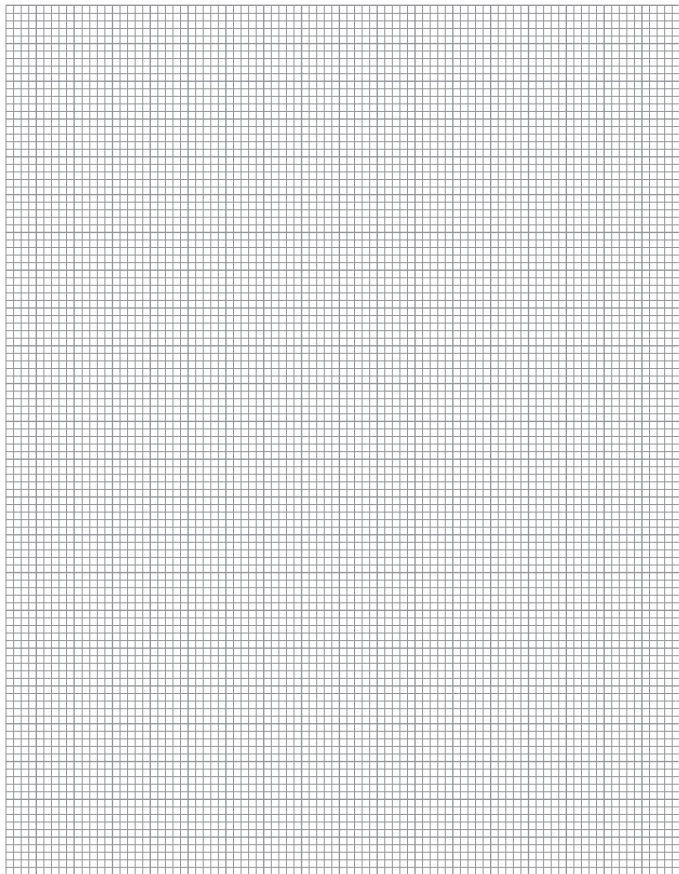
The installation of a new Texparts drafting system on double-apron basis guarantees optimal drafting conditions.

After modernization the system has an ideal draft distribution and guarantees individually adjustable load settings for reliable fibre guidance and nip. Texparts drafting systems ensure perfect fibre control and therefore excellent yarn quality in terms of evenness, strength and count variation.

Another design feature of the Texparts loading system is the precise parallel positioning of top rollers on top of the bottom rollers.

Texparts weighting arms are characterized by constant loading and minimum tolerances, thus making costly and time-consuming readjustment work unnecessary.

NOTES



TECHNICAL
INFORMATIONS

Textile Terms

**General
Technical Terms**



FINENESS DESIGNATION OF FIBRES, SLIVERS AND YARNS FORMULAE FOR CALCULATIONS

	tex	dtex	ktex	Td
tex =	-	$\frac{\text{dtex}}{10}$	ktex · 1000	$\frac{\text{Td}}{9}$
dtex =	tex · 10	-	ktex · 10 000	$\frac{\text{Td}}{0.9}$
ktex =	$\frac{\text{tex}}{1000}$	$\frac{\text{dtex}}{10\,000}$	-	$\frac{\text{Td}}{9000}$
Td =	tex · 9	dtex · 0.9	ktex · 9000	-
Nm =	$\frac{1000}{\text{tex}}$	$\frac{10\,000}{\text{dtex}}$	$\frac{1}{\text{ktex}}$	$\frac{9000}{\text{Td}}$
Ne_B = *	$\frac{590}{\text{tex}}$	$\frac{5905}{\text{dtex}}$	$\frac{0.5905}{\text{ktex}}$	$\frac{5315}{\text{Td}}$
Nf =	$\frac{500}{\text{tex}}$	$\frac{5000}{\text{dtex}}$	$\frac{0.5}{\text{ktex}}$	$\frac{4500}{\text{Td}}$
Nc =	$\frac{566}{\text{tex}}$	$\frac{5660}{\text{dtex}}$	$\frac{0.566}{\text{ktex}}$	$\frac{5094}{\text{Td}}$

Example: Nm 34 converted into tex $\text{tex} = \frac{1000}{\text{Nm}} = \frac{1000}{34} = 30$

Cotton Ne _B = $\frac{840 \text{ yds}}{1 \text{ lb}}$	Metric Conversion factor 1.69 resp. 0.59
Worsted Ne _K = $\frac{560 \text{ yds}}{1 \text{ lb}}$	Metric Conversion factor 1.13 resp. 0.89
Carded wool Ne _W = $\frac{256 \text{ yds}}{1 \text{ lb}}$	Metric Conversion factor 0.52 resp. 1.92
Conversion of roving slivers:	g/m · 14.11 = grains/yard grains/yard · 0.071 = g/m

Nm	Ne_B *	Nf	Nc	
$\frac{1000}{Nm}$	$\frac{590}{Ne_B}$	$\frac{500}{Nf}$	$\frac{566}{Nc}$	= tex
$\frac{10\ 000}{Nm}$	$\frac{5905}{Ne_B}$	$\frac{5000}{Nf}$	$\frac{5660}{Nc}$	= dtex
$\frac{1}{Nm}$	$\frac{0.5905}{Ne_B}$	$\frac{0.5}{Nf}$	$\frac{0.566}{Nc}$	= ktex
$\frac{9000}{Nm}$	$\frac{5315}{Ne_B}$	$\frac{4500}{Nf}$	$\frac{5094}{Nc}$	= Td
-	Ne _B · 1.6934	Nf · 2.0	$\frac{Nc}{0.566}$	= Nm
Nm · 0.5905	-	Nf · 1.181	$\frac{Nc}{0.9584}$	= Ne_B
Nm · 0.5	Ne _B · 0.8467	-	$\frac{Nc}{1.132}$	= Nf
Nm · 0.566	Ne _B · 0.9584	Nf · 1.132	-	= Nc

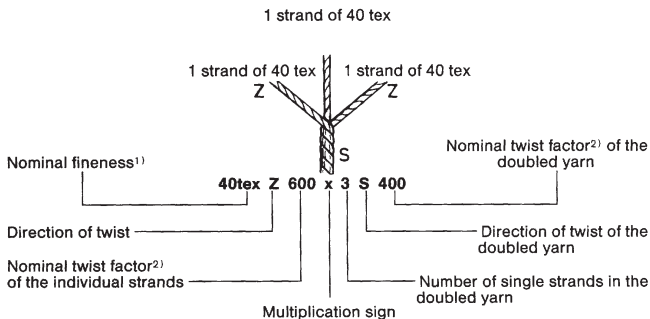
* Ne_B column includes some rounded-off values

Examples:

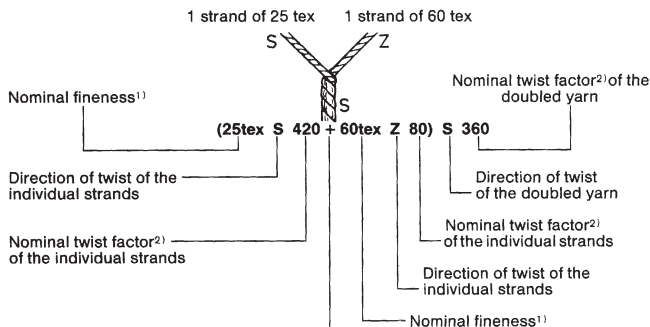
Ne _B	20 · 1.69 = Nm	34
Nm	34 · 0.59 = Ne _B	20
Ne _K	53 · 1.13 = Nm	60
Nm	60 · 0.89 = Ne _K	53
Ne _W	0.8 · 0.52 = Nm	0.4
Nm	0.4 · 1.92 = Ne _W	0.8

FINENESS DESIGNATIONS OF PLY-YARNS

Doubled yarn with identical strands



Doubled yarn made of different threads

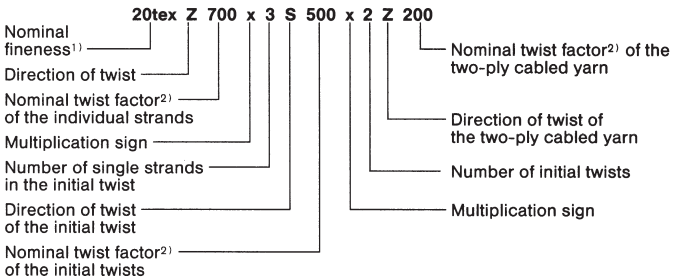
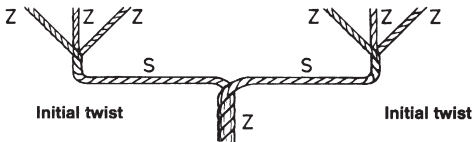


The plus sign indicates that the individual strands are of different structure

Cabled yarn composed of identical initial twists

3 strands of 20 tex each

3 strands of 20 tex each



¹⁾ Normal commercial designation of a yarn or twist.

²⁾ Nominal twist factor = number of twists per metre prescribed for the manufacture of a yarn or twist.

Note: details of structure, twist factor and direction of twist may be omitted if not required.

FORMULAE¹⁾ FOR MILL MACHINE CALCULATIONS

Cards

Draft: Calculation as shown for speed frames
usual drafts: 80–100–110–120

Cardings:

$$\text{Cardings/cm} = \frac{nT}{V_{sp}} = \frac{\text{carding constant}}{A_w \cdot N_w}$$

where: nT = rev/min cylinder
 V_{sp} = feed roller speed in cm/min
 A_w = dia. doffer change gear
 N_w = dia. draft change gear

Production:

$$P_{pr} = \frac{ktex \cdot L \text{ m/min} \cdot 60}{1 \cdot 1000} \cdot \eta$$

$$L \text{ m/min} = \frac{\pi \cdot d \cdot n}{1000}$$

$$P_{pr} = \frac{60 \cdot \pi \cdot d \cdot n}{N_m \cdot 1000 \cdot 1000} \cdot \eta$$

$$P_{pr} = \frac{LK \cdot AW}{N_m} \cdot \eta$$

where: P_{pr} = practical production in kg/hr/mach
 L = delivery in m/min
 d = dia. of coiler or calender rollers in mm
 n = rev./min of coiler or calender rollers
 η = efficiency
 LK = delivery constant
 AW = dia. doffer change gear
 N_m = count (metric)

Draw frames

Draft: Calculation as shown for speed frames

Production:

$$P_{pr} = \frac{ktex \cdot L \text{ m/min} \cdot 60}{1 \cdot 1000} \cdot \eta$$

$$L \text{ m/min} = \frac{\pi \cdot d \cdot n}{1000}$$

$$P_{pr} = \frac{60 \cdot \pi \cdot d \cdot n}{N_m \cdot 1000 \cdot 1000} \cdot \eta$$

¹⁾ The formulae shown in squares are based on the tex unit of fineness.

where:

Ppr = practical production in kg/hr/delivery

L = delivery in m/min

d = dia. of front bottom roller in mm

n = rev/min of front bottom roller

η = efficiency

**Calculating
fineness
in ktex:**

$$ktex = \frac{ktex' \cdot d}{V} \cdot \left(\frac{100-p}{100} \right)$$

**Calculating
Nm
yarn
count:**

$$Nm = Nm' \cdot \frac{V}{d} \cdot \left(\frac{100}{100-p} \right)$$

where:

ktex = fineness of material delivered

ktex' = fineness of feed material

Nm = count delivered

Nm' = count fed

V = draft

d = doublings

p = waste percentage

Speed frames

Draft:

$$\text{Draft} = \frac{\text{fineness of feed material}}{\text{fineness of delivered material}} = \frac{ktex'}{ktex}$$

$$Nw_1 = Nw \cdot \frac{ktex' \cdot ktex_1}{ktex \cdot ktex'_1}$$

$$\text{Draft} = \frac{\text{count delivered}}{\text{count fed}} = \frac{\text{draft constant}}{\text{dia. draft change gear}}$$

$$Nw_1 = Nw \cdot \frac{N \cdot N_1'}{N' \cdot N_1}$$

where:

change gear

delivered

fed

delivered

fed

present

Nw

ktex

ktex'

N

N'

new

Nw₁

ktex₁

ktex'₁

N₁

N'₁

**Building
motion:**

$$S_1 = S \cdot \sqrt{\frac{ktex}{ktex_1}}$$

$$S_1 = S \cdot \frac{\sqrt{N_1}}{\sqrt{N}}$$

where:

ratchet wheel

fineness

count

present

S

ktex

N

new

S₁

ktex₁

N₁

Twist:

$$T/m = \frac{\alpha k\text{tex}}{\sqrt{k\text{tex}}} = \frac{\text{twist constant}}{\text{twist change gear (driving)}} = \frac{\text{nspi}}{L}$$

$$Dw_1 = \frac{Dw \cdot \sqrt{\frac{k\text{tex}_1}{k\text{tex}} \cdot \alpha}}{\alpha_1}$$

$$T = \alpha \cdot \sqrt{Nm} = \frac{\text{twist constant}}{\text{twist change gear (driving)}} = \frac{\text{nspi}}{L}$$

$$Dw_1 = \frac{Dw \cdot \sqrt{N} \cdot \alpha}{\sqrt{N_1} \cdot \alpha_1}$$

where:	present	new
fineness	k _{tex}	k _{tex} ₁
twist multiplier	α	α ₁
twist change gear	Dw	Dw ₁
nspi = rev/min of spindle		
L = delivery of front bottom roller in m/min		
count	N	N ₁

Production:

$$P_{pr} = \frac{k\text{tex} \cdot L \cdot \text{m/min} \cdot 60}{1 \cdot 1000} \cdot \eta \quad \text{or}$$

$$P_{pr} = \frac{60 \cdot G}{x \cdot \frac{1000 \cdot G \cdot T}{k\text{tex} \cdot \text{nspi}} + t_a} \cdot \eta$$

$$P_{pr} = \frac{\text{nspi} \cdot 60}{T \cdot N \cdot 1000} \cdot \eta$$

where:

P _{pr} = practical production in kg/hr/spindle	T = turns per metre
L = delivery in m/min	nspi = rev/min of spindle
η = efficiency	G = bobbin nett weight in grams
N = metric count	x = disturbance factor (1.05-1.2)
	t _a = minutes per doff

Ring frames

Draft:

$$\text{Draft} = \frac{\text{tex}'}{\text{tex}}$$

See also draft calculation for speed frames

Twist:

$$T/m = \frac{\alpha \text{ tex}}{\sqrt{\text{tex}}} = \frac{nspi}{L}$$

Delivery:

$$L = \frac{nspi}{T/m}$$

where:

T/m = turns per metre

L = delivery in m/min

nspi = rev/min of spindle

See also twist calculation for speed frames

Building motion:

$$S_1 = S \cdot \frac{\text{tex}}{\text{tex}_1}$$

$$S_1 = S \cdot \frac{N_1}{N}$$

where:

ratchet wheel

fineness

count

present

S

dtex

N

new

S₁

dtex₁

N₁

Production:

$$Ppr = \frac{\text{tex} \cdot L \cdot 60}{1000} \cdot \eta$$

or

$$Ppr = \frac{\text{tex} \cdot nspi \cdot 60}{T \cdot 1000} \cdot \eta$$

$$Ppr = \frac{nspi \cdot 60}{T \cdot N} \cdot \eta$$

where:

Ppr = practical production in g/hr/spindle

L = delivery in m/min

N = metric count

T = turns per metre

nspi = rev/min of spindle

η = efficiency (empirical values for η = 0.82–0.96; good results are η = 0.88 with manual doff, and η = 0.93 with automatic doff)

Rotor spinning

Draft:

$$\text{Draft} = \frac{\text{tex}'}{\text{tex}}$$

$$\text{Draft} = \frac{\text{feed fineness}}{\text{delivery fineness}}$$

$$\text{Draft} = \frac{\text{count delivered}}{\text{count fed}} = \frac{N}{N'}$$

tex' = feed fineness N = count delivered, e.g. Nm

tex = delivery fineness N' = count fed, e.g. Nm

Twist:

$$T/m = \frac{\alpha \text{ tex}}{\sqrt{\text{tex}}} = \frac{nR}{L}$$

where:

T/m = turns per metre

L = delivery in m/min

nR = rev/min of rotor

Production:

$$\text{Ppr} = \frac{\text{tex} \cdot L \cdot 60}{1000} \cdot \eta$$

or

$$\text{Ppr} = \frac{\text{tex} \cdot nR \cdot 60}{T \cdot 1000} \cdot \eta$$

$$\text{Ppr} = \frac{nR \cdot 60}{T \cdot N} \cdot \eta$$

where :

Ppr = practical production in
g/hr/spinning position

L = delivery in m/min

N = metric count

T = turns per metre

nR = rev/min of rotor

η = efficiency (empirical values for

$\eta = 0.92-0.97$)

ADDITIONS OF REGAIN FOR FIBRES AND FILAMENTS¹⁾

Kind of fibre	Regain percentage	Kind of fibre	Regain percentage
Wool and hair:		Fluoric	0.00
combed fibre	18.25	Modacrylic	2.00
carded fibre	17.00	Polyamide (6.6):	
Hair:		fibre	6.25
combed fibre	18.25	filament	5.75
carded fibre	17.00	Polyamide 6:	
Tail and mane hair:		fibre	6.25
combed fibre	16.00	filament	5.75
carded fibre	15.00		
Silk	11.00	Polyester:	
		fibre	1.00
Cotton	8.50	filament	1.50
mercerized fibre	10.50		
Kapok	10.90	Polyethylene	1.50
Flax or linen	12.00	Polypropylene	2.00
Hemp	12.00	Polyurea	2.00
Jute	17.00	Polyurethane:	
Manila	14.00	fibre	3.50
Alfa	14.00	filament	3.00
Coir	13.00		
Broom	14.00	Vinyial	5.00
Kenaf	17.00	Trivinyil	3.00
Ramie (degreased fibre)	8.50	Elastodien	1.00
Sisal	14.00	Elasthane	1.50
Acetate	9.00	Glass:	
Alginate	20.00	(filament above	
Cupro	13.00	5 microns)	2.00
Modal	13.00	(filament of or	
Regenerated protein-base fibre	17.00	below 5 microns)	3.00
Triacetate	7.00	Metal	2.00
Viscose	13.00	Metallized fibre	2.00
Polyacrylic	2.00	Asbestos	2.00
Polychloride	2.00	Paper yarn	13.75

¹⁾ These are the regains specified in the EC Textile Identification Bill for calculating the fibre weights in textiles.

FURTHER PRACTICAL FORMULAE

Draft: Draft $V = \frac{v_A}{v_Z}$ v_A = speed of stripping roller
in m/min or cm/min

v_Z = speed of feed roller
in m/min or cm/min

Example: Calculate the draft between the stripping roller and the feed roller on a card

$$V = \frac{12.5 \text{ m/min}}{0.54 \text{ m/min}} = 23.1 \quad \begin{array}{l} v_A \text{ (stripping roller)} = 12.5 \text{ m/min} \\ v_S \text{ (feed roller)} = 0.54 \text{ m/min} \end{array}$$

Total draft: The total draft of a drafting system is the **product** of the partial drafts being used.

$$V_G = V_1 \cdot V_2 \cdot \dots \cdot V_n$$

Example:

$$V_G = 25 \cdot 1.5$$

$$V_G = 37.5$$

$$V_1 = \text{front zone draft} = 25$$

$$V_2 = \text{rear zone draft} = 1.5$$

Yield percentage calculation:

$$p = \frac{b \cdot 100 \%}{a}$$

p = yield percentage

b = yield in kg

a = initial quantity in kg

Example:

Initial quantity of cotton for opening is $a = 1200$ kg, final quantity of yarn is $b = 1130$ kg. Calculate yield percentage.

$$p = \frac{1130 \text{ kg} \cdot 100 \%}{1200 \text{ kg}} = 94.2 \% \text{ yield}$$

Unevenness index I according to Martindale:

$$I = \frac{Cv_{\text{eff}}}{Cv_{\text{lim}}}$$

Cv_{eff} = measured yarn evenness

Cv_{lim} = limit of unevenness

Limit of unevenness:

$$Cv_{\text{lim}} = \frac{100}{\sqrt{n}}$$

n = average number of fibres

T_t = Yarn titer

$$n = \frac{T_{tG}}{T_{tF}}$$

T_{tG} = Yarn count in tex

T_{tF} = Fibre count in tex

Average number of fibres:

$$n = \frac{Nm_F}{Nm_G}$$

Nm_F = fibre count

Nm_G = yarn count

YARN TWIST

Twist calculation according to DIN 53 832 – Part 2 (draft)

T = torsion (Latin) = twist

T/m = turns per metre

α = twist multiplier

Formula 1 (tex-System):

$$T/m = \alpha \cdot \sqrt{\frac{1000}{T_t}}$$

Formula 2 (Nm-System):

$$T/m = \alpha \sqrt{Nm}$$

Formula 3 (Neg-System): $T'' = \alpha e \cdot \sqrt{Neg}$

α = varies with the count spun even if similar materials are processed with the same degree of twist. As tenacity becomes less with greater yarn fineness, it is necessary for the twist multiplier to be increased in spinning finer counts.

Explanations:

α = tex system and Nm system twist multiplier

αe = English twist multiplier

αm = metric twist multiplier

T''' = turns per inch

T/m = turns per metre

tex = tex designation of fineness

Neg = English cotton count

Nm = metric count

For conversion of the values:

$$\alpha dtex = \alpha m \cdot 100$$

$$T''' = T/m \cdot 0.0254$$

$$T/m = T''' \cdot 39.37$$

given \ wanted	αm	αe
$\alpha m =$	–	$\alpha e \cdot 30,3$
$\alpha e =$	$\alpha \cdot 0.033$	–

HUMIDITY AND TEMPERATURE

The correct relative humidity is a decisive factor wherever textile fibres are being processed.

Some important criteria are:

1. Absolute humidity content

The absolute air humidity is the momentary amount of water vapour – the water content – in the air. Humidity content is measured in g/kg of dry air.

The higher the temperature the higher is the amount of water vapour – water content – that can be assimilated by the air up to the saturation point.

2. Relative humidity content

The relative humidity content of the air is the ratio between the absolute air humidity actually present in the air (see item 1. above) and the amount of water vapour that would be present in the air if maximum possible saturation of the air were achieved. This ratio is expressed in %.

For example: at 7 °C (44.6 °F) 1 kg (2.2 lb) of dry air at maximum saturation contains 6.29 g (97 grains) of moisture. If the actual air momentarily present at 7 °C (44.6 °F) contains 4.72 g (73 grains) of water vapour, then:

$$\text{Relative humidity of the air} = \frac{100 \cdot 4.72 \text{ g}}{6.29 \text{ g}} = 75 \% \text{ relative humidity}$$

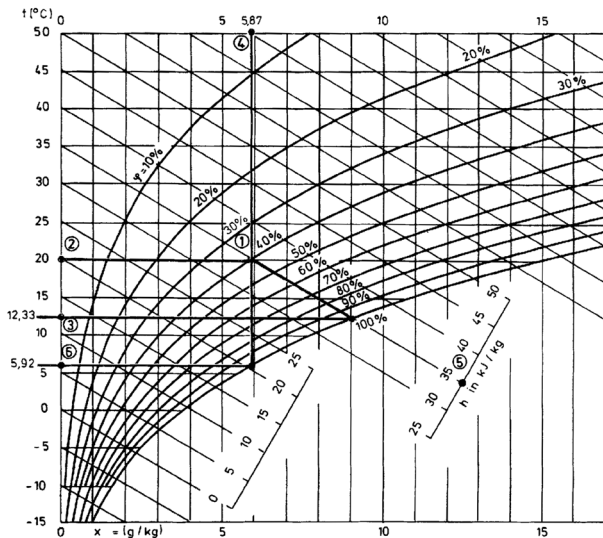
$$\text{Relative humidity of the air} = \frac{100 \cdot 73 \text{ grains}}{97 \text{ grains}} = 75 \% \text{ relative humidity}$$

Companies processing textile fibres must determine by trial the ideal air humidity at the various processing stages for each type of fibre material.

The following values have produced good results and may be taken as a guide:

Processing stage	Relative humidity
Separating	45 - 50 %
Carding and drafting	50 - 55 %
Combing and slubbing	50 - 60 %
Spinning	45 - 60 %
Spooling and doubling	50 - 55 %
Weaving	75 - 85 %

THE H,X DIAGRAM FOR DETERMINING AIR CONDITIONING FACTORS



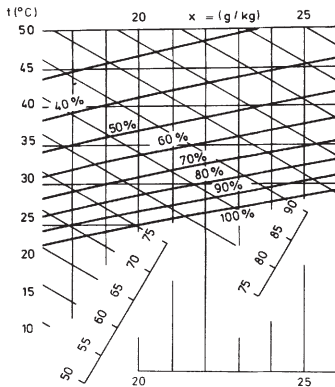
The h,x diagram for air humidity according to Mollier allows the air conditions and changes in these conditions to be read off and the respective values for temperature, heat content, relative humidity and absolute water content to be determined. It should, as a matter of principle, be remembered that all values given in the h,x diagram are based on 1 kg of dry air.

Explanation of the diagram:

Temperatures of the dry thermometer $t^{\circ}\text{C}$

The line running from left to right is provided, on the left-hand side, with a temperature scale. Each point on this line corresponds to the temperature value recorded on the left.

Depiction of this h,x diagram by courtesy of Messrs. Wiessner GmbH, Bayreuth.



h,x diagram:

t = air temperature in °C
(dry thermometer)

φ = relative humidity in %

i = heat content (enthalpy) in kJ
per kilo of dry air

x = water content in grams per kilo of dry air

The h,x diagram is based on an air pressure of 1 bar = 10^5 Pa (Pascal)

Example of a reading²⁾:

On the diagram 20.0 °C / 40 % rel. hum ①

Temperature of the dry thermometer: $t = 20.0$ °C ②

Temperature of the wet thermometer $t = 12.33$ °C ③

Water content: $x = 5.87$ g/kg ④

Heat content: $h = 35.1$ kJ/kg ⑤
of dry air

Relative humidity: $\varphi = 40$ % ①

Dew-point temperature: TP = 5.92 °C ⑥

²⁾ see diagram for values
①–⑥

Temperatures of the wet thermometer t °C

will be found at the intersection of the line h and the saturation line $\varphi = 100$ %. Read off against the temperature scale on the left.

Absolute moisture content x (g/kg) water content

designated by the vertical lines. Each point on one of these verticals indicates the identical absolute water content of the air.

Heat content h (kJ/kg)

runs from the saturation line = $\varphi = 100$ % upwards to the left.

Relative air humidity in the room in φ %

is represented by the individual lines from $\varphi = 10$ % to $\varphi = 100$ % (saturation line). At a relative humidity of 100 % the air is fully saturated and can no longer assimilate any more moisture. The advent of additional moisture shows as vapour.

Dew point TP

This is the designation for all air conditions lying on the saturation line $\varphi = 100$ %. The dew point temperature is read off on the left-hand temperature scale of the diagram.

BRITISH-METRIC UNITS CONVERSION TABLE

British-Metric

Unit	Symbol	
Length		
inch	in	1 in = 25.4 mm
foot	ft	1 ft = 30.5 cm
yard	yd	1 yd = 0.914 m
furlong	fur	1 fur = 201 m
mile	mile	1 mile = 1.61 km
mile, naut	n mile	1 n mile = 1.852 km

Weight

grain	grain	1 grain = 0.0648 g
ounce	oz	1 oz = 28.3 g
pound	lb	1 lb = 454 g
stone	stone	1 stone = 6.35 kg

Area

square inch	in ²	1 in ² = 6.45 cm ²
square foot	ft ²	1 ft ² = 929 cm ²
square yard	yd ²	1 yd ² = 0.836 m ²
acre	ac	1 ac = 0.405 ha
square mile		1 sq. mile = 2.59 km ²

Volume

cubic inch	in ³	1 in ³ = 16.4 cm ³
cubic foot	ft ³	1 ft ³ = 0.0283 m ³
cubic yard	yd ³	1 yd ³ = 0.765 m ³
bushel	bus	1 bus = 0.0364 m ³
fluid ounce	fl oz	1 fl oz = 28.4 ml
pint	pt	1 pt = 568 ml UK 1 pt = 473 ml US
gallon	gal	1 gal = 4.55 Liter UK 1 gal = 3.79 Liter US

Force

pound-force	lbf	1 lbf = 4.45 N
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Temperature

degree Fahrenheit °F	°C = $\frac{5}{9} (°F - 32)$
----------------------	------------------------------

Power

horsepower	hp	1 hp = 0.736 kW
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Metric-British

Unit	Symbol	
Length		
Centimetre	cm	1 cm = 0.394 in
metre	m	1 m = 3.28 ft
metre	m	1 m = 1.09 yd
Kilometre	km	1 km = 4.97 fur
Kilometre	km	1 km = 0.621 mile
Kilometre	km	1 km = 0.54 n mile

Gram	g	1 g = 15.432 grain
Gram	g	1 g = 0.0353 oz
Kilogram	kg	1 kg = 2.20 lb
Kilogram	kg	1 kg = 0.157 stone

square		
Centimetre	cm ²	1 cm ² = 0.155 in ²
square metre	m ²	1 m ² = 10.8 ft ²
square metre	m ²	1 m ² = 1.20 yd ²
Hectare	ha	1 ha = 2.47 ac
square km	km ²	1 km ² = 0.386 sq. mile

Cubic		
Centimetre	cm ³	1 cm ³ = 0.0610 in ³
Cubic metre	m ³	1 m ³ = 35.3 ft ³
Cubic metre	m ³	1 m ³ = 1.31 yd ³
Cubic metre	m ³	1 m ³ = 27.5 bus
Millilitre	ml	1 ml = 0.0352 fl oz
Millilitre	ml	1 Liter = 1.76 pt US
or Litre	l	1 Liter = 2.11 pt US
Litre or	l	1 m ³ = 220 gal UK
Cubic metre	m ³	1 m ³ = 264 gal US

Newton	N	1 N = 0.225 lbf
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degree Celsius	°C	°F = $\frac{9}{5} \times °C + 32$
----------------	----	-----------------------------------

Kilowatt	kW	1 kW = 1.36 hp
----------	----	----------------

MILLIMETER INTO INCHES¹⁾ AND INCHES INTO MILLIMETRES CONVERSION TABLE

mm	0.0 mm	0.1 mm	0.2 mm	0.3 mm	0.4 mm	mm
	inches	inches	inches	inches	inches	
0	–	0.00394	0.00787	0.0118	0.0157	0
1	0.0394	0.0433	0.0472	0.0512	0.0551	1
2	0.0787	0.0827	0.0866	0.0906	0.0945	2
3	0.1181	0.1220	0.1260	0.1299	0.1339	3
4	0.1575	0.1614	0.1654	0.1693	0.1732	4
5	0.1969	0.2008	0.2047	0.2087	0.2126	5
6	0.2362	0.2402	0.2441	0.2480	0.2520	6
7	0.2756	0.2795	0.2835	0.2874	0.2913	7
8	0.3150	0.3189	0.3228	0.3268	0.3307	8
9	0.3543	0.3583	0.3622	0.3661	0.3701	9
10	0.3937	0.3976	0.4016	0.4055	0.4094	10

Example: 3.8 mm = 0.1496"

Inches	Inches	mm	Inches	Inches	mm
–	–	–	1/4	0.25	6.350
	1/64	0.015625		17/64	0.265625
	1/32	0.03125		9/32	0.28125
	3/64	0.046875		19/64	0.296875
1/16		0.0625	5/16		0.3125
	5/64	0.078125		21/64	0.328125
	3/32	0.09375		11/32	0.34375
	7/64	0.109375		23/64	0.359375
1/8		0.125	3/8		0.375
	9/64	0.140625		25/64	0.390625
	5/32	0.15625		13/32	0.40625
	11/64	0.171875		27/64	0.421875
3/16		0.1875	7/16		0.4375
	13/64	0.203125		29/64	0.453125
	7/32	0.21875		15/32	0.46875
	15/64	0.234375		31/64	0.484375

¹⁾ Also previously referred to in German usage as "Zoll"

MILLIMETER INTO INCHES¹⁾ AND INCHES INTO MILLIMETRES CONVERSION TABLE

mm	0.5 mm	0.6 mm	0.7 mm	0.8 mm	0.9 mm	mm
	inches	inches	inches	inches	inches	
0	0.0197	0.0236	0.0276	0.0315	0.0354	0
1	0.0591	0.0630	0.0669	0.0709	0.0748	1
2	0.0984	0.1024	0.1063	0.1102	0.1142	2
3	0.1378	0.1417	0.1457	0.1496	0.1535	3
4	0.1772	0.1811	0.1850	0.1890	0.1929	4
5	0.2165	0.2205	0.2244	0.2283	0.2323	5
6	0.2559	0.2598	0.2638	0.2677	0.2717	6
7	0.2953	0.2992	0.3031	0.3071	0.3110	7
8	0.3346	0.3386	0.3425	0.3465	0.3504	8
9	0.3740	0.3780	0.3819	0.3858	0.3898	9
10	0.4134	0.4173	0.4213	0.4252	0.4291	10

Inches	Inches	mm	Inches	Inches	mm	
1/2	0.5	12.700	3/4	0.75	19.050	
	33/64	0.515625	13.097	49/64	0.765625	19.447
	17/32	0.53125	13.494	25/32	0.78125	19.844
	35/64	0.546875	13.891	51/64	0.796875	20.241
9/16	0.5625	14.288	13/16	0.8125	20.638	
	37/64	0.578125	14.684	53/64	0.828125	21.034
	19/32	0.59375	15.081	27/32	0.84375	21.431
	39/64	0.609375	15.478	55/64	0.859375	21.828
5/8	0.625	15.875	7/8	0.875	22.225	
	41/64	0.640625	16.272	57/64	0.890625	22.622
	21/32	0.65625	16.669	29/32	0.90625	23.019
	43/64	0.671875	17.066	59/64	0.921875	23.416
11/16	0.6875	17.463	15/16	0.9375	23.813	
	45/64	0.703125	17.859	61/64	0.953125	24.209
	23/32	0.71875	18.256	31/32	0.96875	24.606
	47/64	0.734375	18.653	63/64	0.984375	25.003

Example: 3 3/16" = 76.20 + 4.763 = 80.963 mm

INCHES INTO MILLIMETRES CONVERSION TABLE

Inches	0.0"	0.1"	0.2"	0.3"	0.4"	Inches
	mm	mm	mm	mm	mm	
0"	0.00	2.540	5.080	7.620	10.16	0"
1"	25.40	27.94	30.48	33.02	35.56	1"
2"	50.80	53.34	55.88	58.42	60.96	2"
3"	76.20	78.74	81.20	83.82	86.36	3"
4"	101.60	104.14	106.68	109.22	111.76	4"
5"	127.00	129.54	132.08	134.62	137.16	5"
6"	152.40	154.94	157.48	160.02	162.56	6"
7"	177.80	180.34	182.88	185.42	187.96	7"
8"	203.20	205.74	208.28	210.82	213.36	8"
9"	228.60	231.14	233.68	236.22	238.76	9"
10"	254.00	256.54	259.09	261.62	264.16	10"

Inches	0.000"	0.001"	0.002"	0.003"	0.004"	Inches
	mm	mm	mm	mm	mm	
0.00"	0.000	0.0254	0.0508	0.0762	0.102	0.00"
0.01"	0.254	0.279	0.305	0.330	0.356	0.01"
0.02"	0.508	0.533	0.559	0.584	0.610	0.02"
0.03"	0.762	0.787	0.813	0.838	0.864	0.03"
0.04"	1.016	1.041	1.067	1.092	1.118	0.04"
0.05"	1.270	1.295	1.321	1.346	1.372	0.05"
0.06"	1.524	1.549	1.575	1.600	1.626	0.06"
0.07"	1.778	1.803	1.829	1.854	1.880	0.07"
0.08"	2.032	2.057	2.083	2.108	2.134	0.08"
0.09"	2.286	2.311	2.337	2.362	2.388	0.09"

Example: 7.182 = ? mm

from upper table

$$7.1'' = 180.34 \text{ mm}$$

from lower table

$$\underline{0.082'' = 2.083 \text{ mm}}$$

$$7.182'' = 182.423 \text{ mm}$$

¹⁾ Also previously referred to in German usage as "Zoll"

INCHES INTO MILLIMETRES CONVERSION TABLE

Inches	0.5"	0.6"	0.7"	0.8"	0.9"	Inches
	mm	mm	mm	mm	mm	
0"	12.70	15.24	17.78	20.32	22.86	0"
1"	38.10	40.64	43.18	45.72	48.26	1"
2"	63.50	66.04	68.58	71.12	73.66	2"
3"	88.90	91.44	93.98	96.52	99.06	3"
4"	114.30	116.84	119.38	121.92	124.46	4"
5"	139.70	142.24	144.78	147.32	149.86	5"
6"	165.10	167.64	170.18	172.72	175.26	6"
7"	190.50	193.04	195.58	198.12	200.66	7"
8"	215.90	218.44	220.98	223.52	226.06	8"
9"	241.30	243.84	246.38	248.92	251.46	9"
10"	266.70	269.24	271.78	274.32	276.86	10"

Inches	0.005"	0.006"	0.007"	0.008"	0.009"	Inches
	mm	mm	mm	mm	mm	
0.00"	0.127	0.152	0.178	0.203	0.229	0.00"
0.01"	0.381	0.406	0.432	0.457	0.483	0.01"
0.02"	0.635	0.660	0.686	0.711	0.737	0.02"
0.03"	0.889	0.914	0.940	0.965	0.991	0.03"
0.04"	1.143	1.168	1.194	1.219	1.245	0.04"
0.05"	1.397	1.422	1.448	1.473	1.499	0.05"
0.06"	1.651	1.676	1.702	1.727	1.753	0.06"
0.07"	1.905	1.930	1.956	1.981	2.007	0.07"
0.08"	2.159	2.184	2.210	2.235	2.261	0.08"
0.09"	2.413	2.438	2.464	2.489	2.515	0.09"

INTRODUCTION OF INTERNATIONAL SI UNITS

The SI system of units (Système internationale d'Unités) was created in order to simplify international co-operation.

The SI units have been adopted by legislation in the EC, the USA, the Soviet Union and the Comecon countries as obligatory units of measurement.

The SI units are frequently-used parameters in science and technology.

Units of pressure

	bar	Pa N/m ²	MPa N/mm ²
1 bar = 1 daN/cm ²	1	10 ⁵	0.1
1 Pa = 1 N/m ²	10 ⁻⁵	1	10 ⁻⁶
1 MPa = 1 N/mm ²	10	10 ⁶	1

Units of energy

	J N m W s	daJ daN m	kW h
1 J = 1 N m = 1 W s	1	0.1	0.278 · 10 ⁻⁶
1 daJ = 1 daN m	10	1	2.78 · 10 ⁻⁶
1 kW h =	3.6 · 10 ⁶	360 000	1

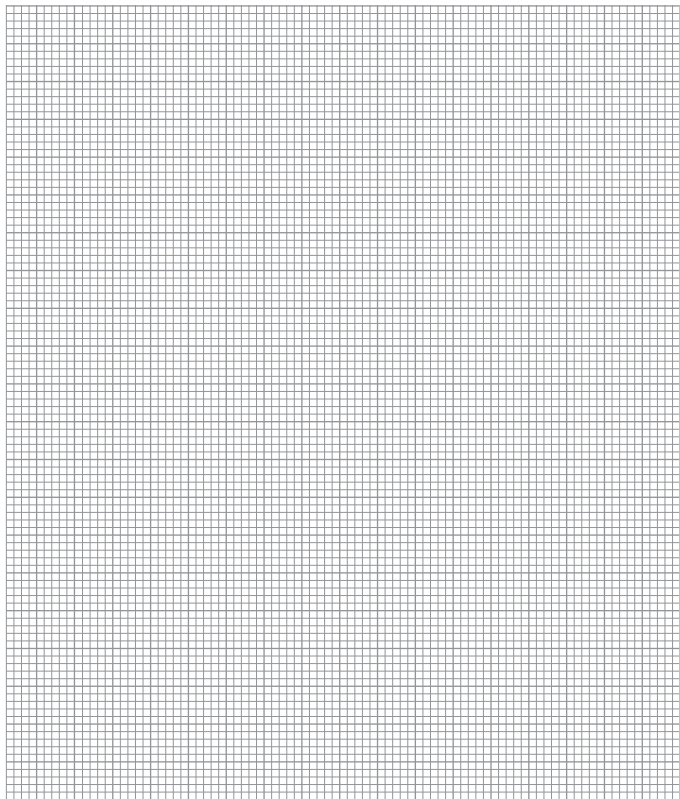
Units of power

	W J/s N m/s	kW
1 W = 1 J/s = 1 N m/s =	1	0.001
1 kW =	1000	1

Units of force

	N	daN
1 N =	1	0.1
1 daN =	10	1

NOTES



TEXPARTS PRODUCTS

**Complete list
of Product
Reference
Numbers**



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PRODUCT REFERENCE NUMBERS ACCORDING TO ASCENDING REFERENCE NUMBER

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0017 392	Lubricating adapter	Chapter 9-	13
0019 983	Lubricating adapter	Chapter 1- Chapter 9-	13 13
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0026 714	Lubricating nozzle	Chapter 9-	15
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0994 131	Tool set with bag	Chapter 5-	71
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0994 252	Lubricating adapter	Chapter 9-	13
0994 253	Lubricating adapter	Chapter 9-	13
0996 685	Front clearer roller holder	Chapter 5-	73
0997 434	Screwdriver SW 6	Chapter 5-	66
0997 440	Draft field gauge	Chapter 5-	60
0997 445	Allen key SW 6	Chapter 5-	58, 69
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0997 455	Screwdriver bit	Chapter 5-	52, 54, 58, 60, 62, 66, 71
0997 491	Allen key SW 5	Chapter 5-	52, 54, 58, 60, 62
0998 111	Lubricating adapter	Chapter 9-	13
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