Temco Deflection rollers & Guide rollers for Hygiene industry



Roller Bearing for Hygiene Industry Engineered bearing solutions

Customized Temco bearings for special applications

We Create Solutions

Temco products are key elements in the production of synthetic yarns and are used on the machines of all well-known manufacturers in the international textile industry. The core expertise of our company located in Hammelburg, Germany, are the development, manufacturing and distribution of standard as well as integrated bearing solutions. A team of over 150 employees is responsible for the design, manufacturing and worldwide distribution of customized bearing solutions.

Due to Temco's special expertise in Textile, the related Hygiene Industry is benefitting from this long experience. Guiding textile Webs and Non-wovens using sophistacted engineered bearing technology is the core competence from Temco and its products ULR deflection pulleys and ULW deflection rollers.

Further, elastic bands for Baby Diapers can be guided with the small Temco FR Guide Rollers and are a perfect fit together with the ULR and ULW rollers to upgrade the customers machine output. Highly engineered bearings tailormade for every technical demand (high speed, avoiding slippage, high forces, smooth running in combination with high forces and speed) are the most important advantages for Temco. Not only simple guiding processes, further the process of sophisticated splicing is mastered by Temco and its bearings.

Long service life and lifetime lubrication of the components save maintenance costs and minimize expensive machine downtime.

The hygiene industry is well equipped with Temco products.

Content

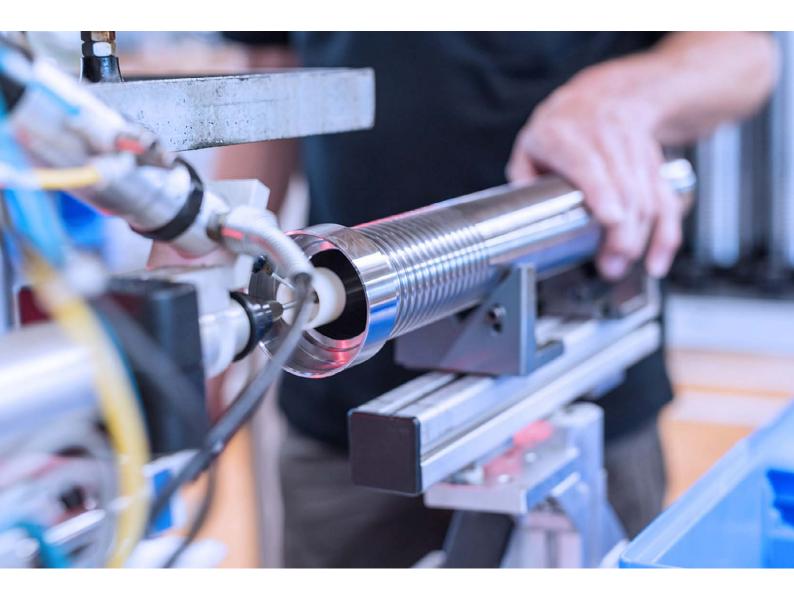
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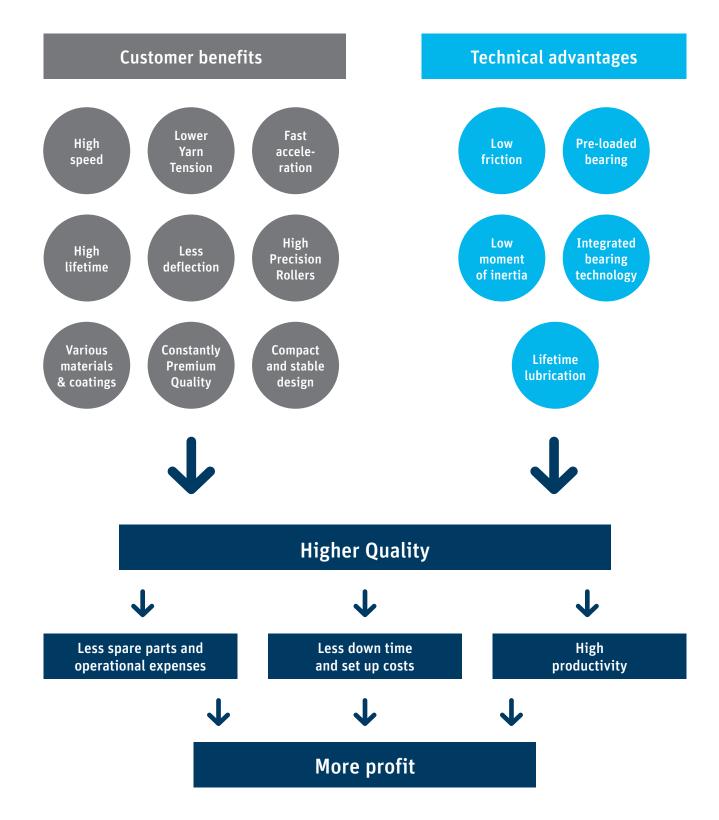
Competence in Bearing Technology

Do you intend to reduce your budget for spare parts without losses in quality? Are your machine downtimes too long due to maintenance work exchanging the wear parts? Then you should ask for an Engineered Bearing Solution.

With a broad-based development department, we supply outstanding quality Temco bearing arrangements for use in battery production. Over 70 years of expertise in rolling bearing technology, combined with state-of-the-art production and manufacturing machinery, we deliver premium quality Made in Germany.

High accuracies thanks to sophisticated manufacturing processes and ideal matching to individual customer requirements optimize their processes and thus their results.





5

outstanding Advantages Deflection Rollers

Long service life

Withstand high forces

Smooth running due to low friction

Lifetime lubrication

Plug-and-play solution



Deflection Rollers More than flexible

Temco defines all essential parameters regarding function, customer benefit and reliability of the product in the conception phase. In order to achieve the highest level of quality, flexibility and cost-effectiveness, Temco carries out the essential machining processes in-house using state-of-the-art production equipment. In all phases of project development, Temco relies on a high level of quality assurance and use modern industrial measuring techniques for this purpose.

Temco deflection rollers are available with various coatings such as non-stick coating. Furthermore, all ULR and ULW are sealed on both sides. In addition, different greases are used for different applications, adapted to the bearing load, speed and process sequences. Due to the lifetime lubrication of all rollers maintenance costs can be saved.

Temco rollers combine expertise of bearing technology and high prices roller surface. The ULR+ULW are available in a variety of dimensions as well as customizable for various (customer individual) machine adpations.



ULR Deflection rollers

- Temco offers highly sophisticated roller solutions with its ULR deflection rollers
- broade range of length and diameters
- customer specific machine adaption



ULR34250-08

ULW Deflection rollers

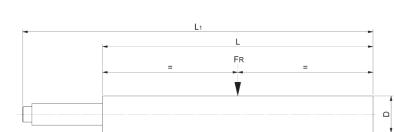
The flexible ULW-adapter is able to correct misalignments of the machine's supporting positions:

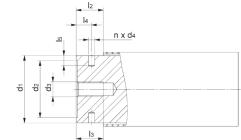
- length compensation with a range of $\pm 0,3$ mm
- angle error compensation with a range of $\pm 2^{\circ}$ (to correct coaxial errors of the holes or inclination of the walls).



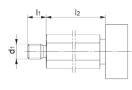
ULW34200-02

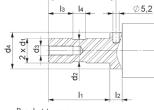
Technical Details ULR Figures and overview

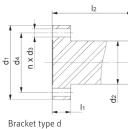


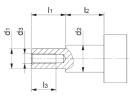












Bracket type e

Bracket type b

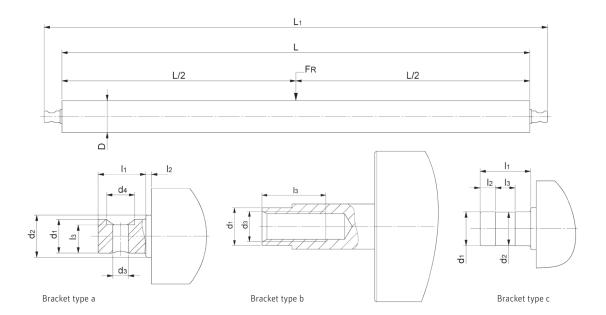
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Bracket

Туре			Shell				Bracket	t										
	v _{max} [m/min]	F _{Rmax} [N]	D [mm]	L [mm]	Mate- rial	Coat	Туре	dı [mm]	d₂ [mm]	d₃ [mm]	d4 [mm]	lı [mm]	l2 [mm]	l₃ [mm]	l4 [mm]	l₅ [mm]	Lı [mm]	n
ULR28150-E-011	400	100	28	150	Al	-	α	Ø 25.92	-	M6	-	-	8	12	-	-	158	-
ULR34250-06	750	100	34	250	CFRP	_	α	Ø 29.6	-	M8	Ø 5.5	-	24.8	20.5	12.5	-	275	1
ULR34250-07	750	100	34	250	CFRP	_	b	M12	SW24	-	-	15	125	-	-	-	390	-
ULR34250-08	750	100	34	250	CFRP	non-stick	α	Ø 29.6	-	M8	Ø 5.2	-	25	20.5	12.5	-	275	1
ULR34250-09	750	100	34	250	CFRP	non-stick	b	M12	SW24	-	-	15	125	-	-	-	390	-
ULR34250-10 ²	750	100	34	250	CFRP	-	С	Ø 18	Ø 17	M8	-	45	-1.5	16	8	37.5	293.5	-
ULR34250-11	750	100	34	250	CFRP	non-stick	С	Ø 18	Ø 17	M8	-	45	-1.5	16	8	37.5	293.5	-
ULR34250-151	750	100	34	250	CFRP	_	С	Ø 18	Ø 17	M8	-	75	-1.5	16	8	37.5	323.5	-
ULR34300-02-HP1	700	100	34	300	CFRP	-	α	Ø 29.6	-	M10	Ø 5.2	-	25	20.5	12.5	-	325	1
ULR34400-02 ²	650	100	34	400	CFRP	_	С	Ø 18	Ø 17	M8	-	45	-1.5	16	8	37.5	443.5	-
ULR34400-E-03 ²	385	100	34	400	CFRP	_	α	Ø 30	Ø 25	M8	-	-	15	16	-	-	415	-
ULR34400-E2-01	350	50/20	34	2x200	CFRP	_	α	Ø 26.65	Ø 25	M8	-	-	82.5	16	-	-	487.5	-
ULR3495-E-00	385	100	34	95	CFRP	-	w/o	-	-	-	-	-	-	-	-	-	400	-
ULR36400-E-001	400	100	36	400	Al	anodized	w/o	-	-	-	-	-	-	-	-	-	260	-
ULR44200-02 ²	450	100	44	200	CFRP	_	с	Ø 20	Ø 18	M8	Ø 29.6	50	10	20	10	55	390	-
ULR44250-041	550	100	44	250	CFRP	_	b	M12	SW24	-	-	15	125	-	-	-	318.5	-
ULR44250-11 ²	700	100	44	250	CFRP	_	С	Ø 18	Ø 17	M8	Ø 23.5	45	23.5	16	8	37.5	318.5	-
ULR44250-121	700	100	44	250	CFRP	non-stick	С	Ø 18	Ø 17	M8	Ø 23.5	45	23.5	16	8	37.5	360	-
ULR44300-02 ²	450	100	44	300	CFRP	_	С	Ø 20	Ø 18	M8	Ø 29.6	50	10	20	10	55	112.5	-
ULR44400-0512	650	100	44	400	CFRP	_	с	Ø 18	Ø 17	M8	Ø 29.6	45	-1.5	16	8	37.5	443.5	-
ULR44400-061	650	100	44	400	CFRP	non-stick	с	Ø 18	Ø 17	M8	Ø 29.6	45	-1.5	16	8	37.5	443.5	-
ULR44650-00	450	200	44	650	CFRP	-	С	Ø 18	Ø 17	M8	Ø 29.6	45	-1.5	16	8	37.5	693.5	-
ULR60300-011	700	100	60	300	CFRP	-	α	Ø 54.5	Ø 46	M12	Ø 5.2	0	22	22	12.5	-	322	2
ULR60320-00 ²	700	100	60	320	CFRP	-	α	Ø 54.5	Ø 46	M12	Ø 5.2	0	22	22	12.5	-	342	2
ULR60440-05	450	200	60	440	Al	hard anodized	е	Ø 25	Ø 35	M12	-	15	115	15	-	-	570	-

Technical Details ULW

Figures and overview



Туре			Shell				Bracket											
	v _{max} [m/min]	F _{Rmax} [N]	D [mm]	L [mm]	Mate- rial	Coat	Туре	dı [mm]	d₂ [mm]	d₃ [mm]	d4 [mm]	lı [mm]	l2 [mm]	l₃ [mm]	l4 [mm]	ls [mm]	Lı [mm]	n
ULW34160-00	600	100	34	160	CFRP	-	С	Ø 12	Ø 11.8		-	18	5.5	7	-	-	-	-
ULW34220-01	600	100	34	220	CFRP	-	α	Ø 13	Ø 15	Ø 6.5	-	18.5	42	-	-	-	-	-
ULW34320-02	600	100	34	320	CFRP	-	С	Ø 12	Ø 11.8		-	18	5.5	7	-	-	-	-
ULW34500-02	600	100	34	500	CFRP	-	С	Ø 12	Ø 11.8		-	18	5.5	7	-	-	-	-
ULW34500-04	600	100	34	500	CFRP	-	α	Ø 12	Ø 15	Ø 5.5	Ø 10	17	2	10	-	-	-	-
ULW34500-05	600	100	34	500	CFRP	_	α	Ø 12	Ø 15	Ø 5.5	Ø 10	37	2	10	-	-	-	-
ULW35920-02	500	100	35	920	CFRP	-	α	Ø 12	Ø 15	Ø	Ø 10	37	2	10	-	-	-	-
ULW40900-00	400	120	40	900	Al	anodized	С	Ø 15	Ø 14	-	-	30	2.5	7	-	-	-	-
ULW44600-00	600	100	44	600	CFRP	-	С	Ø	Ø 14	-	-	30	2.5	7	-	-	-	-
ULW44800-01	600	100	44	800	CFRP	-	α	Ø 12	Ø 15	Ø 5.5	Ø 10	17	2	10	-	-	-	-
ULW44800-03	600	100	44	800	CFRP	-	С	Ø 15	Ø 14	-	-	30	2.5	7	-	-	-	-
ULW441080-00	600	100	44	1080	CFRP	-	С	Ø 15	Ø 14	-	-	30	2.5	7	-	-	-	-
ULW60530-00	700	200	60	530	CFRP	-	с	Ø 12	Ø 11.8	-	-	18	5.5	7	-	-	-	-
ULW60530-01	700	200	60	530	CFRP	non-stick	с	Ø 12	Ø 11.8	-	-	18	5.5	7	-	-	-	-
ULW601000-00	700	200	60	1 000	CFRP	-	b	Ø 25/SW22	-	M8	-	-	-	17	-	-	-	-
ULW601000-01	700	200	60	1000	CFRP	PC915S	b	Ø 25	-	M8	-	-	-	17	-	-	-	-

OUTSTANDING ADVANTAGES

Various bearing types

TEME

KEMEO

TEBUIG UI OP

Overlapping winding protection

Different shapes and thread channels

Dust protection due to special sealing technology

TEMCO

Germany ade in Germany

Guide Rollers FR



Many different types (coatings, color)

Maximum speed, durability and output

Smooth running

Guide Rollers Smooth running

The latest generation of the smooth-running guide rollers FR26 series are a milestone in the field of easy running guiding elements. Bearing friction is reduced by 50% which means the driving force can be reduced by the same extent. This enables guidance of Lycra at very low tension levels.

Advantages

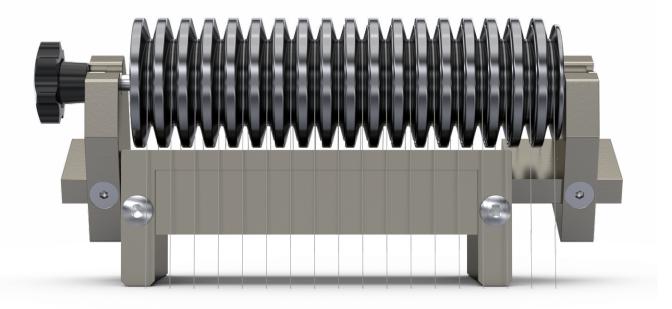
- Reduced yarn tension
- Smooth running
- No initial run-in period required
- Low moment of inertia
- Long service life
- Different roll shell forms
- Various surfaces
- In addition to the standard shapes, intermediate sizes and customized solutions of the guide roller series FR26 are also available.

Specifications

- Guide Rollers FR26 can be mounted side by side on a shaft with \varnothing 5mm
- 5 different pitches are available (3 mm/5 mm/7 mm/ 9 mm/12,8 mm/13mm)
- high speed up to 700 m/min at a low failure rate leads to the maximum output

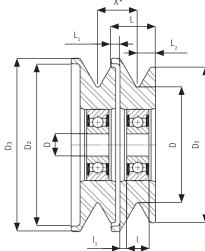
Individual designs

- · High concentricity and cylinder form accurarcies
- Plug-and-play solution as the bearings are supplied already run-in
- · Low mass moment of inertia
- Long service life
- Various coatings possible
- Maximum process speeds for maximum output.



Technical Details FR

Figures and overview



Туре	Max. yarn speed	Max. yarn temp.	Max. radial load	Dime	ensions	[mm]											Groove
	[m/min]	[°C]	[N]	D	D_1	D ₂	D ₃	d	L	L ₁	L ₂	ι	l_1	Х	Bearing	Surface	(distance)
FR2606-011	700	70	40	26	30	31.5	33.5	5	6	2	2	4	0	5	easy-running	running anodized black	
FR2606-021	700	70	40	26	30	31.5	33.5	5	6	2	2	4	0	5	easy-running	anodized blue	1
FR2606-031	700	70	40	26	30	31.5	33.5	5	6	2	2	4	0	5	easy-running	anodized gray	1
FR2606-041	700	70	40	26	30	31.5	33.5	5	6	2	2	4	0	5	easy-running	anodized red	1
FR2606-051	700	70	40	26	30	31.5	33.5	5	6	2	2	4	0	5	easy-running	anodized green	1
FR2607-001	700	70	20	26	32.5	32.5	32.5	5	7	-	2	5	1	3	easy-running	PC 915S	2
FR2607-011	700	70	20	26	32.5	32.5	32.5	5	7	-	3.5	5	1	-	easy-running	PC 915S	1
FR2608-01	700	70	60	26	35	36.5	39	5	8	2	3	5	0.5	7	Standard	anodized black	1
FR2608-02	700	70	60	26	35	36.5	39	5	8	2	3	5	0.5	7	Standard	anodized blue	1
FR2608-03	700	70	60	26	35	36.5	39	5	8	2	3	5	0.5	7	Standard	anodized gray	1
FR2608-04	700	70	60	26	35	36.5	39	5	8	2	3	5	0.5	7	Standard	anodized red	1
FR2608-051	700	70	20	26	35	36.5	39	5	8	2	3	5	0.5	7	easy-running	Hardcoat	1
FR2610-00	700	70	60	26	35	36.5	39	5	10	2	4	5	1.5	9	Standard	Hardcoat	1
FR2610-01 ¹	700	70	60	26	35	36.5	39	5	10	2	4	5	1.5	9	Standard	PC 915S	1
FR2610-02	700	70	20	26	35	36.5	39	5	10	2	4	5	1.5	9	easy-running	Hardcoat	1
FR2610-04	700	70	20	26	35	36.5	39	5	10	2	4	5	1.5	9	easy-running	hard anodized black	1
FR2610-05	700	70	20	26	35	36.5	39	5	10	2	4	5	1.5	9	easy-running	hard anodized blue	1
FR2610-06	700	70	20	26	35	36.5	39	5	10	2	4	5	1.5	9	easy-running	hard anodized gray	1
FR2610-07	700	70	20	26	35	36.5	39	5	10	2	4	5	1.5	9	easy-running	hard anodized red	1
FR2610-08	700	70	20	26	35	36.5	39	5	10	2	4	5	1.5	9	easy-running	hard anodized green	1
FR2614-01	700	70	60	26	35	36.5	39	5	14	8	3	5	0.5	12.8	Standard	anodized black	1
FR2614-02	700	70	60	26	35	36.5	39	5	14	8	3	5	0.5	12.8	Standard	anodized blue	1
FR2614-03	700	70	60	26	35	36.5	39	5	14	8	3	5	0.5	12.8	Standard	anodized gray	1
FR2614-04	700	70	60	26	35	36.5	39	5	14	8	3	5	0.5	12.8	Standard	anodized red	1
FR2614-05	700	70	20	26	35	36,5	39	5	14	6	4	5	1,5	13	easy-running	Hardcoat	1

¹ Acceptance only with minimum quantity ² Minimum yarn distance [mm]

Use in the Hygiene Industry



Temco products and solutions improve productivity and help to achieve a measurable competitive edge. Some components for particularly sensitive areas of the hygiene industry comply with the prescribed regulations of the American Food and Drug Agency (FDA). High technical accuracies, a wide product variety and a long service life, combined with the sophisticated integrated bearing solutions, make it possible to meet the high quality requirements for the end product.



Baby care

The high quality of baby diapers starts at the beginning of the process chain with the foil or nonwoven. It must not only be of high quality, but also water repellent and soft. Temco ULR/ULW (e.g. with non-stick coating) with a length of approx. 400 mm are used for transporting the nonwoven, as is the FR26 for elastic threads to ensure uniform tension of the waistband and cuffs. Pull-up diapers use more FR26 than standard Velcro/adhesive diapers because the elastic areas are larger.

- Pull-up diapers: FR26, ULR and ULW with mostly small to midsize rollers.
- Velcro/adhesive diapers: FR, ULR and ULW with mostly small to midsize rollers.

Adult care

For the production of adult diapers and incontinence pads the Temco Deflection rollers ULR and ULW with non-stick coating and dimensions up to 1 000 mm are particularly important in this process. By gluing the different layers of diapers with hot glue, the adhesive does not stick to the roll. Similar to the production of baby diapers, guide rollers FR are used for processing the rubber band used in the diaper.



Feminine care

With its long experience in the textile industry, Temco has great know-how in the hygiene industry, especially for the production of feminine hygiene articles like Sanitary napkins. In these products, the various nonwoven layers are laid on top of each other, whereby the exact deflection of the fine materials is of great importance. Temco's deflection rollers – mostly small to midsize – optimize and stabilize this processing of nonwoven.



Medical masks & Wound care

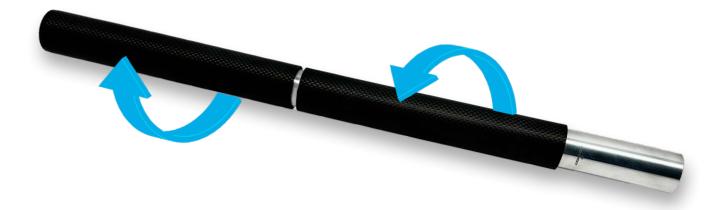
Temco deflection rollers are used for the production of medical masks, plasters, wound dressings or similar products and some of which comply with FDA regulations.



Seeking New Solutions

ULR Double Roller

The latest development for the hygiene sector is the Temco Double Roller. The new deflection roller (e.g. ULR34400-E2-01) offers high customer benefits thanks to its double running surface. Films, nonwovens and other materials for packaging processes and the manufacture of hygiene articles can be deflected, using two different rotation speeds or directions at the same time.



By integrating the ULR Double Roller into their systems, manufacturers in the hygiene sector can achieve greater process control, increased production efficiency, and improved product quality—all while benefiting from Temco's renowned engineering expertise.

The eXchangeable Deflection Roller ULX

Deflection rollers with non-stick plasma coating are mainly used in the nonwoven sector, offering a unique combination of excellent trac-tion properties and outstanding non-stick performance. These characteristics are particularly beneficial in areas where adhesives, such as hotmelts, are used, preventing unwanted material buildup and ensuring smooth operation. These characteristics are particularly important in areas where adhesives, so called "hotmelts", are used. To counteract product disadvantages, such as

- limited durability of the coating/degrading non-stick performance over the service life
- worn out/damaged coating requires complete exchange of the Roller and all its components and
- customer needs to keep complete spare rollers in stock for the ability to maintain the machine,

Temco has come up with a special solution: the exchangeable Deflection roller ULX.



The eXchangeable design

To address these challenges, Temco has developed the innovative Exchangeable Deflection Roller ULX, designed to significantly reduce downtime, lower maintenance costs, and optimize spare part management.

With the Temco ULX eXchangeable Deflection roller, nonwoven manufacturers can achieve greater reliability, lower costs, and improved machine efficiency, ensuring smoother production processes and a more sustainable approach to roller maintenance.

Customer benefits

- Quick and easy shell replacement: The roll shell can be exchanged effortless, minimizing machine down time and operational costs.
- Cost savings through reusability: Instead of replacing the entire roller, only the worn-out shell needs to be changed. This results in a cost reduction while keeping the high-quality bearing performance.
- Simplified maintenance: By reusing key roller components, maintenance becomes more efficient, reduces costs for stock keeping of complete rollers and minimized overall operational costs.

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