

Temco Deflection rollers & Guide rollers
for Hygiene industry

TEMCO

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 sophisticated 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 tailor-made 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

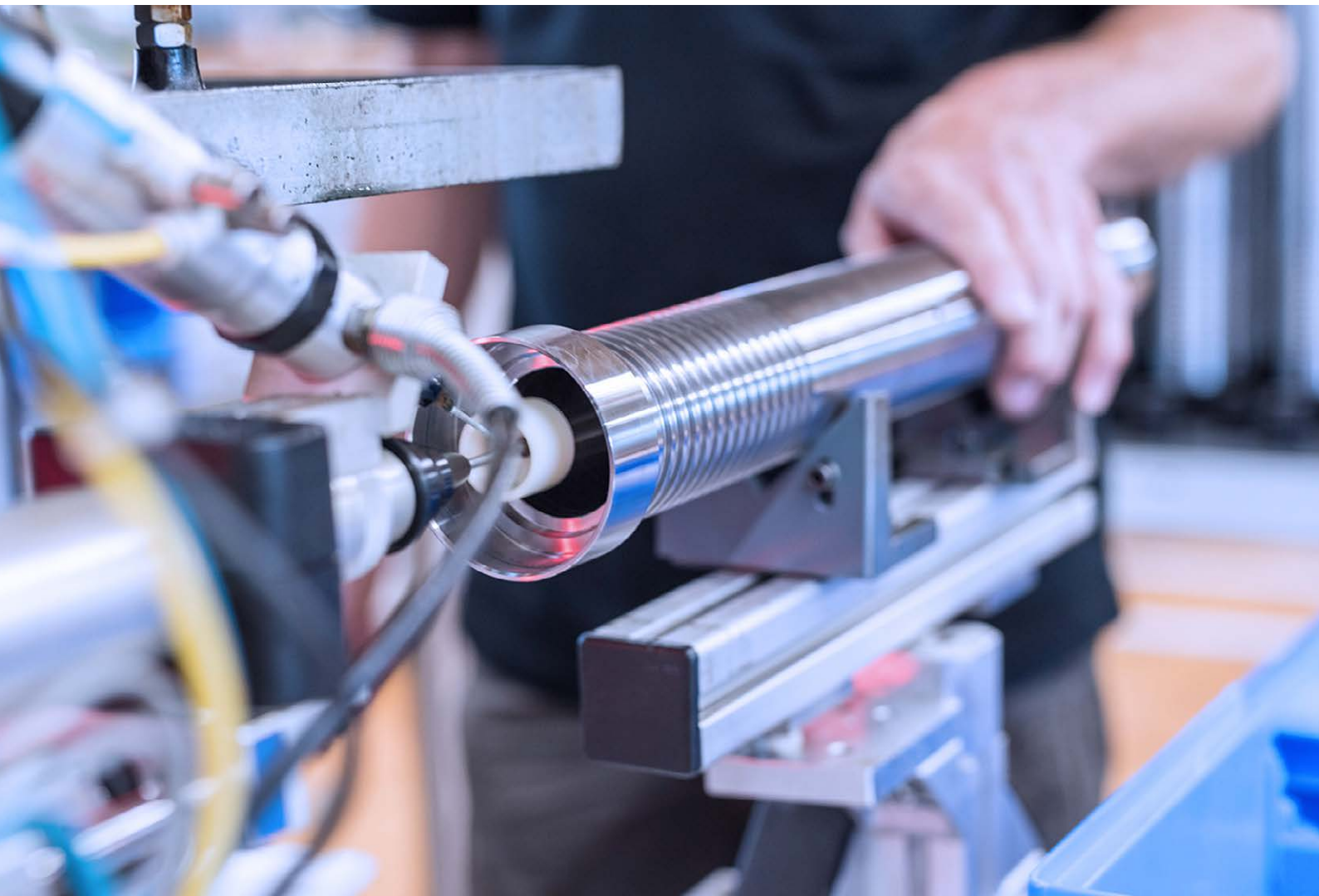
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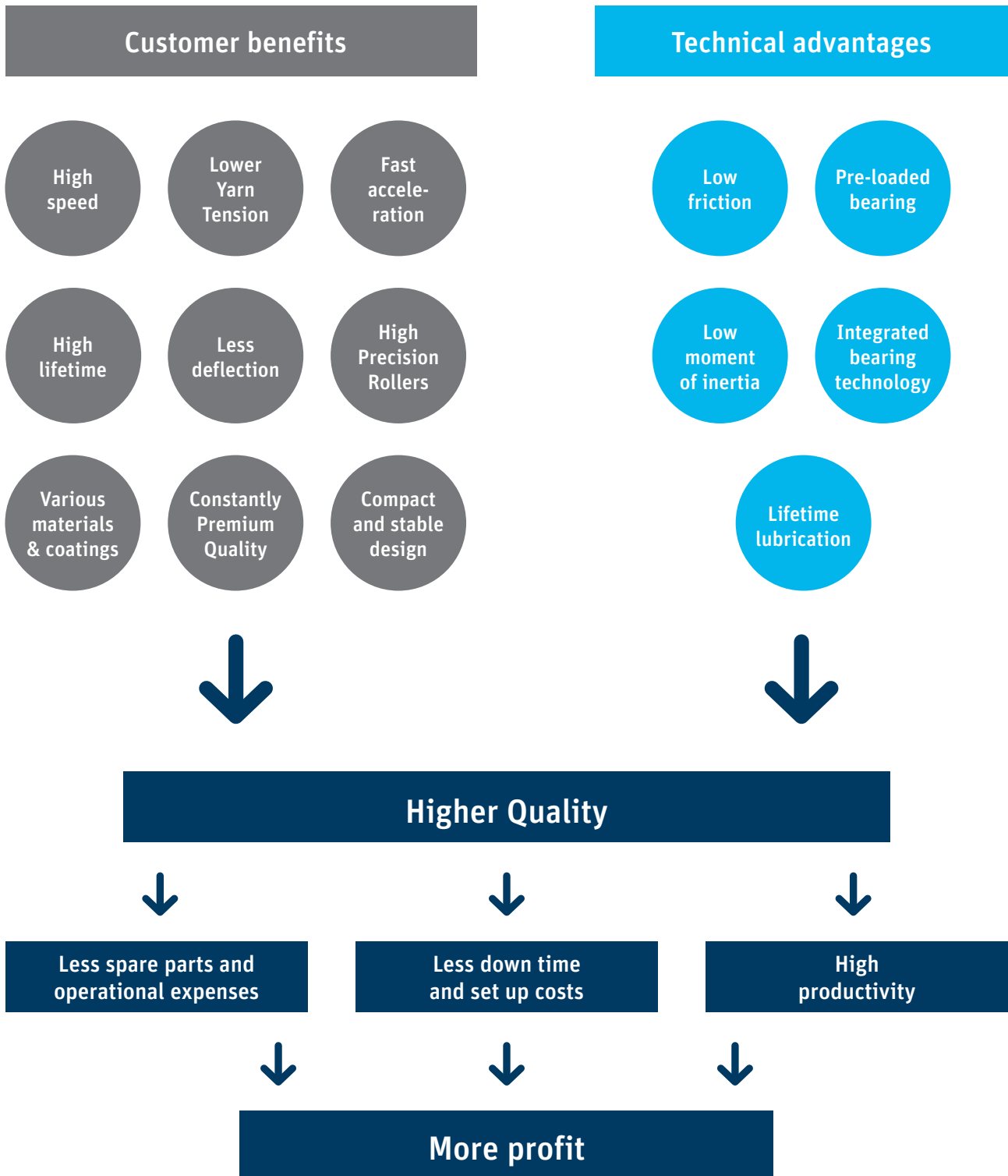
Competence in Bearing Technology

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.





OUTSTANDING

ADVANTAGES

Deflection Rollers

Long service life

Withstand
high forces

Smooth running
due to low friction

Lifetime lubrication

Plug-and-play solution

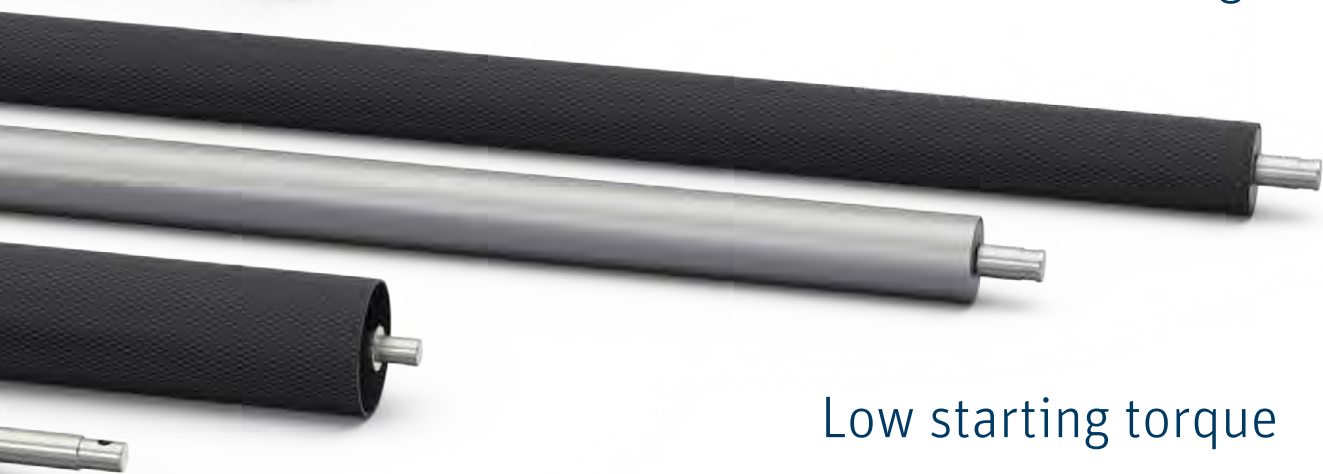




ULR + ULW

Less deflection

Transport of very thin
films without wrinkling



Low starting torque

Maximum speed – maximum
output – maximum profit

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
- broad 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:

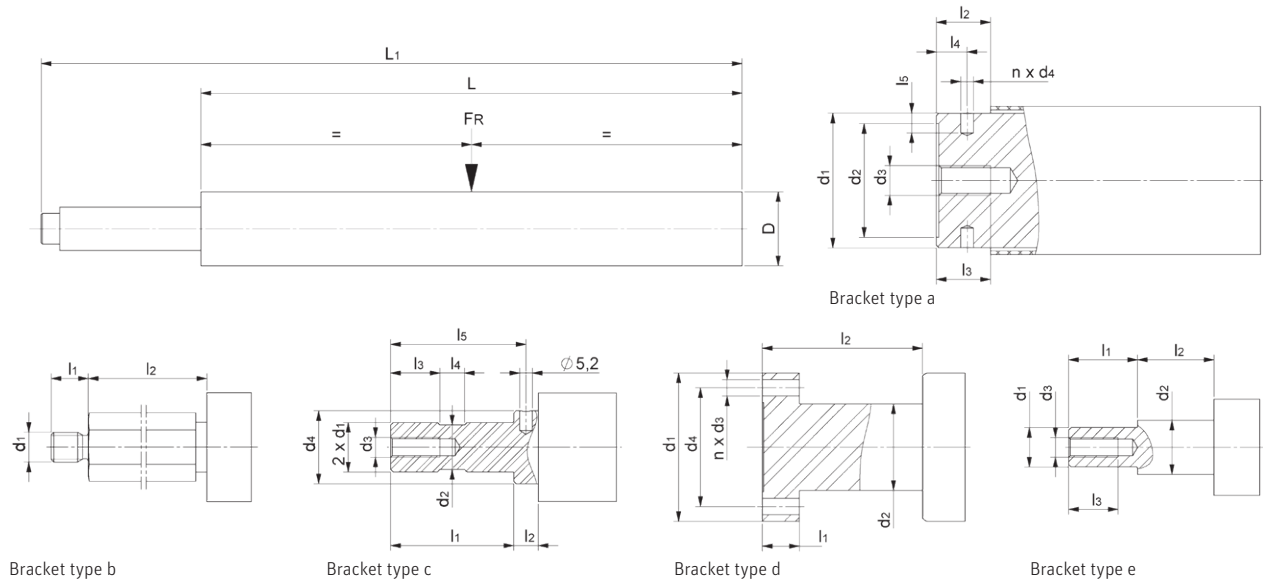
- length compensation with a range of $\pm 0,3$ mm
- angle error compensation with a range of $\pm 2^\circ$ (to correct coaxial errors of the holes or inclination of the walls).



ULW34200-02

Technical Details ULR

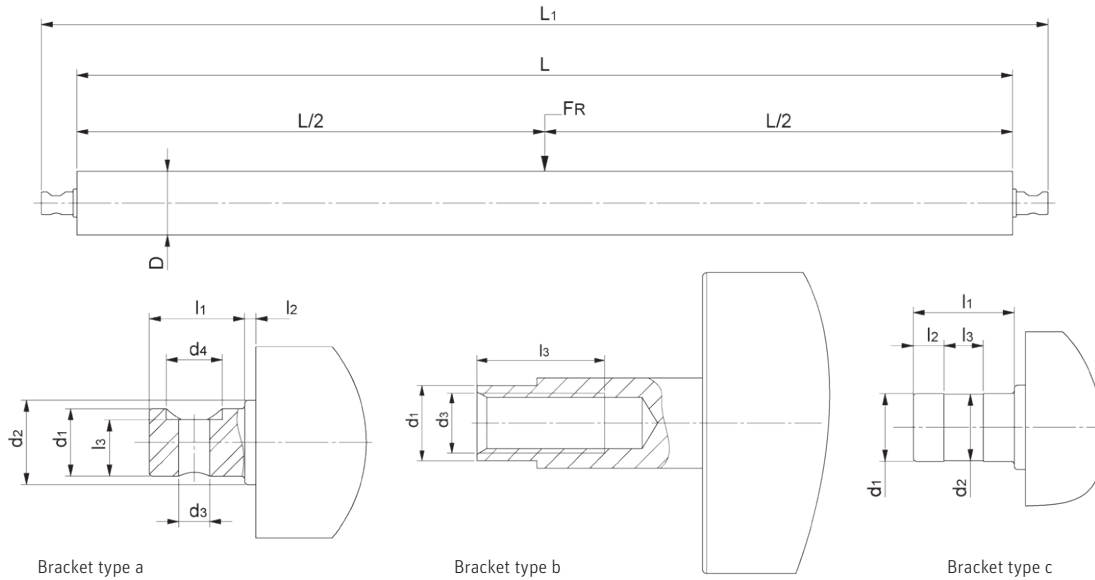
Figures and overview



Type	Shell				Bracket													
	V_{max} [m/min]	F_{Rmax} [N]	D [mm]	L [mm]	Material	Coat	Type	d_1 [mm]	d_2 [mm]	d_3 [mm]	d_4 [mm]	l_1 [mm]	l_2 [mm]	l_3 [mm]	l_4 [mm]	l_5 [mm]	L_1 [mm]	n
ULR28150-E-01 ¹	400	100	28	150	Al	-	a	∅ 25.92	-	M6	-	-	8	12	-	-	158	-
ULR34250-06	750	100	34	250	CFRP	-	a	∅ 29.6	-	M8	∅ 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	a	∅ 29.6	-	M8	∅ 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	-	c	∅ 18	∅ 17	M8	-	45	-1.5	16	8	37.5	293.5	-
ULR34250-11	750	100	34	250	CFRP	non-stick	c	∅ 18	∅ 17	M8	-	45	-1.5	16	8	37.5	293.5	-
ULR34250-15 ¹	750	100	34	250	CFRP	-	c	∅ 18	∅ 17	M8	-	75	-1.5	16	8	37.5	323.5	-
ULR34300-02-HP ¹	700	100	34	300	CFRP	-	a	∅ 29.6	-	M10	∅ 5.2	-	25	20.5	12.5	-	325	1
ULR34400-02 ²	650	100	34	400	CFRP	-	c	∅ 18	∅ 17	M8	-	45	-1.5	16	8	37.5	443.5	-
ULR34400-E-03 ²	385	100	34	400	CFRP	-	a	∅ 30	∅ 25	M8	-	-	15	16	-	-	415	-
ULR34400-E2-01	350	50/20	34	2x200	CFRP	-	a	∅ 26.65	∅ 25	M8	-	-	82.5	16	-	-	487.5	-
ULR3495-E-00	385	100	34	95	CFRP	-	w/o	-	-	-	-	-	-	-	-	-	400	-
ULR36400-E-00 ¹	400	100	36	400	Al	anodized	w/o	-	-	-	-	-	-	-	-	-	260	-
ULR44200-02 ²	450	100	44	200	CFRP	-	c	∅ 20	∅ 18	M8	∅ 29.6	50	10	20	10	55	390	-
ULR44250-04 ¹	550	100	44	250	CFRP	-	b	M12	SW24	-	-	15	125	-	-	-	318.5	-
ULR44250-11 ²	700	100	44	250	CFRP	-	c	∅ 18	∅ 17	M8	∅ 23.5	45	23.5	16	8	37.5	318.5	-
ULR44250-12 ¹	700	100	44	250	CFRP	non-stick	c	∅ 18	∅ 17	M8	∅ 23.5	45	23.5	16	8	37.5	360	-
ULR44300-02 ²	450	100	44	300	CFRP	-	c	∅ 20	∅ 18	M8	∅ 29.6	50	10	20	10	55	112.5	-
ULR44400-05 ¹²	650	100	44	400	CFRP	-	c	∅ 18	∅ 17	M8	∅ 29.6	45	-1.5	16	8	37.5	443.5	-
ULR44400-06 ¹	650	100	44	400	CFRP	non-stick	c	∅ 18	∅ 17	M8	∅ 29.6	45	-1.5	16	8	37.5	443.5	-
ULR44650-00	450	200	44	650	CFRP	-	c	∅ 18	∅ 17	M8	∅ 29.6	45	-1.5	16	8	37.5	693.5	-
ULR60300-01 ¹	700	100	60	300	CFRP	-	a	∅ 54.5	∅ 46	M12	∅ 5.2	0	22	22	12.5	-	322	2
ULR60320-00 ²	700	100	60	320	CFRP	-	a	∅ 54.5	∅ 46	M12	∅ 5.2	0	22	22	12.5	-	342	2
ULR60440-05	450	200	60	440	Al	hard anodized	e	∅ 25	∅ 35	M12	-	15	115	15	-	-	570	-

Technical Details ULW

Figures and overview



Type	Shell				Bracket													
	v_{max} [m/min]	F_{Rmax} [N]	D [mm]	L [mm]	Material	Coat	Type	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	l1 [mm]	l2 [mm]	l3 [mm]	l4 [mm]	l5 [mm]	L1 [mm]	n
ULW34160-00	600	100	34	160	CFRP	-	c	∅ 12	∅ 11.8	-	-	18	5.5	7	-	-	-	-
ULW34220-01	600	100	34	220	CFRP	-	a	∅ 13	∅ 15	∅ 6.5	-	18.5	42	-	-	-	-	-
ULW34320-02	600	100	34	320	CFRP	-	c	∅ 12	∅ 11.8	-	-	18	5.5	7	-	-	-	-
ULW34500-02	600	100	34	500	CFRP	-	c	∅ 12	∅ 11.8	-	-	18	5.5	7	-	-	-	-
ULW34500-04	600	100	34	500	CFRP	-	a	∅ 12	∅ 15	∅ 5.5	∅ 10	17	2	10	-	-	-	-
ULW34500-05	600	100	34	500	CFRP	-	a	∅ 12	∅ 15	∅ 5.5	∅ 10	37	2	10	-	-	-	-
ULW35920-02	500	100	35	920	CFRP	-	a	∅ 12	∅ 15	∅	∅ 10	37	2	10	-	-	-	-
ULW40900-00	400	120	40	900	Al	anodized	c	∅ 15	∅ 14	-	-	30	2.5	7	-	-	-	-
ULW44600-00	600	100	44	600	CFRP	-	c	∅	∅ 14	-	-	30	2.5	7	-	-	-	-
ULW44800-01	600	100	44	800	CFRP	-	a	∅ 12	∅ 15	∅ 5.5	∅ 10	17	2	10	-	-	-	-
ULW44800-03	600	100	44	800	CFRP	-	c	∅ 15	∅ 14	-	-	30	2.5	7	-	-	-	-
ULW441080-00	600	100	44	1080	CFRP	-	c	∅ 15	∅ 14	-	-	30	2.5	7	-	-	-	-
ULW60530-00	700	200	60	530	CFRP	-	c	∅ 12	∅ 11.8	-	-	18	5.5	7	-	-	-	-
ULW60530-01	700	200	60	530	CFRP	non-stick	c	∅ 12	∅ 11.8	-	-	18	5.5	7	-	-	-	-
ULW601000-00	700	200	60	1000	CFRP	-	b	∅ 25/SW22	-	M8	-	-	-	17	-	-	-	-
ULW601000-01	700	200	60	1000	CFRP	PC915S	b	∅ 25	-	M8	-	-	-	17	-	-	-	-

¹ Acceptance only with minimum quantity

² FDA conformity

OUTSTANDING

ADVANTAGES

Various bearing types

Overlapping
winding protection

Different shapes
and thread channels

Dust protection due to
special sealing technology



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

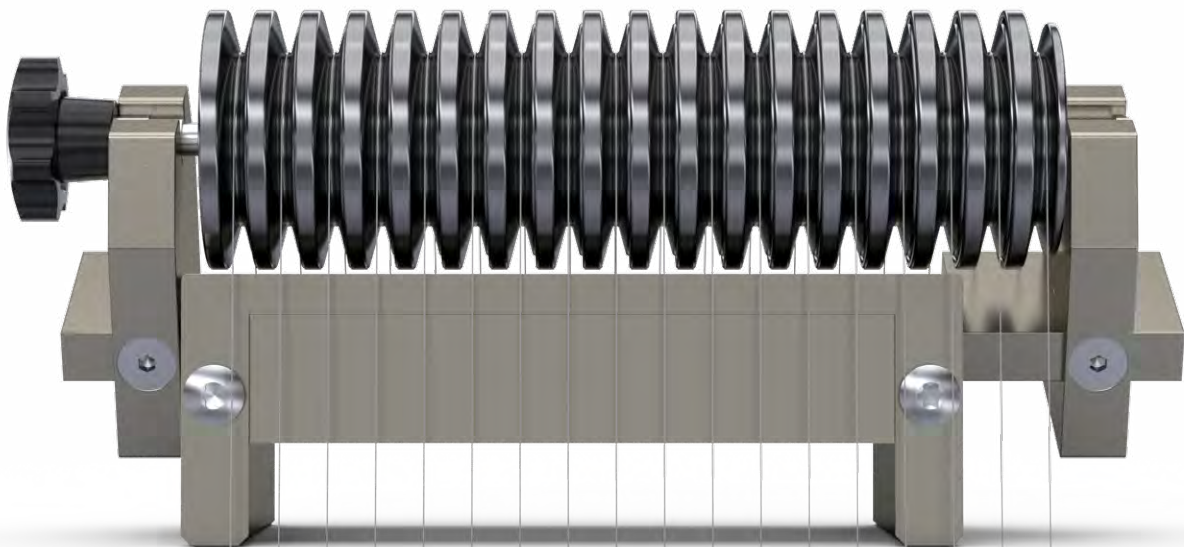
- Reduced yarn tension
- Smooth running
- No initial run-in period required
- Low moment of inertia
- Long service life
- Different roll shell forms
- Various surfaces
- In addition to the standard shapes, intermediate sizes and customized solutions of the guide roller series FR26 are also available.

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

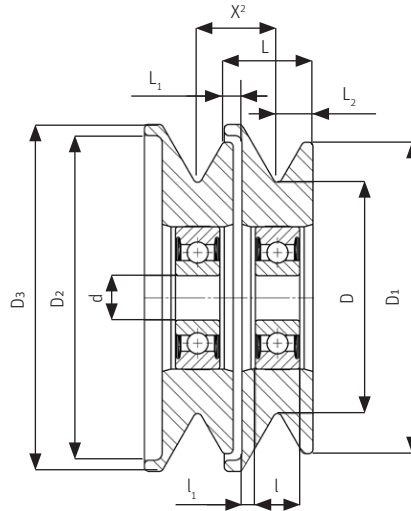
Individual designs

- High concentricity and cylinder form accuracies
- 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.



Guide Rollers FR26

Product figures and overview



Type	Max. yarn speed [m/min]	Max. yarn temp. [°C]	Max. radial load [N]	Dimensions [mm]											Bearing	Surface	Groove (distance)
				D (Ø)	D ₁	D ₂	D ₃	d	L	L ₁	L ₂	l	l ₁	X ²			
FR2606-01	700	70	20	26	30	31.5	31.5	5	6	2	2	4	0	5	easy-running	anodized black	1
FR2606-02 ¹	700	70	20	26	30	31.5	31.5	5	6	2	2	4	0	5	easy-running	anodized blue	1
FR2606-03 ¹	700	70	20	26	30	31.5	31.5	5	6	2	2	4	0	5	easy-running	anodized gray	1
FR2606-04 ¹	700	70	20	26	30	31.5	31.5	5	6	2	2	4	0	5	easy-running	anodized red	1
FR2606-05 ¹	700	70	20	26	30	31.5	31.5	5	6	2	2	4	0	5	easy-running	anodized green	1
FR2607-00 ¹	700	70	20	26	32.5	31.5	31.5	5	7	-	2	5	1	3	easy-running	PC 915S	2
FR2607-01 ¹	700	70	20	26	32.5	31.5	31.5	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
FR2608-05 ¹	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 ¹	700	70	20	26	35	36.5	39	5	10	2	4	5	1.5	9	easy-running	hard anodized black	1
FR2610-05 ¹	700	70	20	26	35	36.5	39	5	10	2	4	5	1.5	9	easy-running	hard anodized blue	1
FR2610-06 ¹	700	70	20	26	35	36.5	39	5	10	2	4	5	1.5	9	easy-running	hard anodized gray	1
FR2610-07 ¹	700	70	20	26	35	36.5	39	5	10	2	4	5	1.5	9	easy-running	hard anodized red	1
FR2610-08 ¹	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 ¹	700	70	60	26	35	36.5	39	5	14	8	3	5	0.5	12.8	standard	anodized blue	1
FR2614-03 ¹	700	70	60	26	35	36.5	39	5	14	8	3	5	0.5	12.8	standard	anodized gray	1
FR2614-04 ¹	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

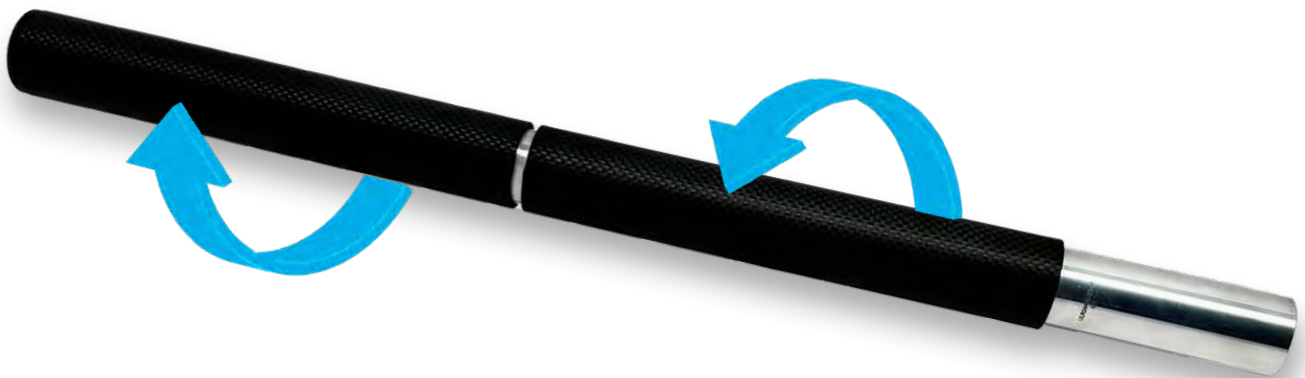
Temco deflection rollers are used for the production of medical masks, plasters, wound dressings or similar products and some of which comply with FDA regulations.



Seeking New Solutions

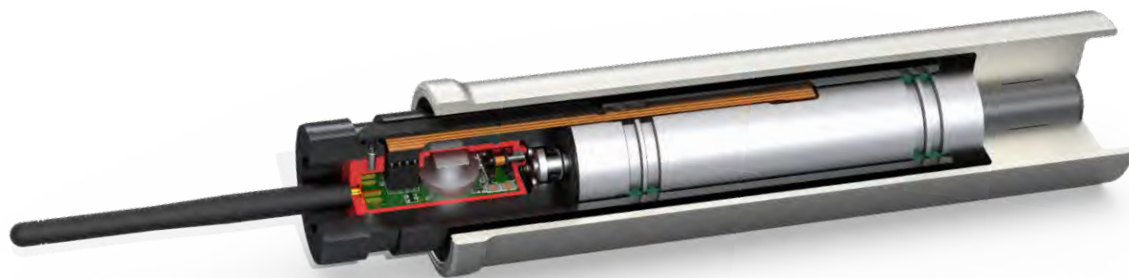
ULR Double Roller

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.



i-Bearing

i-Bearing is an intelligent bearing solution for various applications which provides an online condition monitoring service for each connected bearing. By enabling bearings to communicate their operating conditions, almost in real-time, i-Bearing allows to monitor its bearing life cycle, resulting in higher reliability scheduled maintenance and less machine down time.

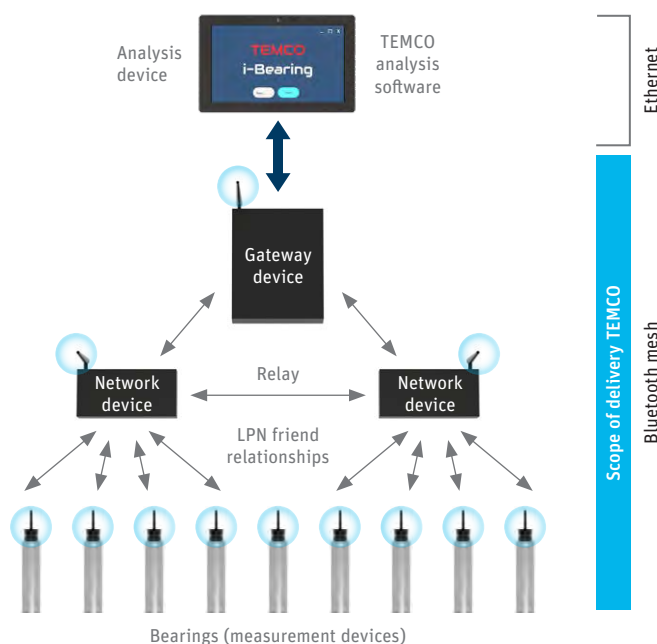


Installation speed and simplicity

i-Bearing is wireless and self-powered through energy harvesting. Cables are no longer required which improves the speed of information transfer. Thanks to its plug and play nature, installation and network registration of the i-Bearing is very simple

Predictive maintenance enabled

The intelligent system of the i-Bearing allows equipped condition monitoring of every single Temco bearing installed within a plant. By measuring speed, vibration acceleration and temperature, the i-Bearing identifies critical conditions allowing bearings to be replaced before failure. Machine maintenance cycles are therefore optimized and expensive downtime minimized. The status condition of all installed Temco bearings can be monitored 24/7 within the plant through its own software application.





Rieter Components Germany GmbH

Temco
Fuldaer Strasse 19
97762 Hammelburg
Germany
T +49 (0)9732 87 0
info@temco.de

www.temco.de

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