

Tru-Trac Roller

Tru-Trac Rollers (Pty) Ltd. is the world's

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Our approach has always been to solve customer problems

The World's 1st True Tracking Roller

Tru-Trac makes belt misalignment a thing of the past

Our approach has always been to solve customer problems

Simplicity is a sign of quality

Our approach has always been to solve customer problems



BELT TRACKING TECHNOLOGY

INTRODUCTION TO TRU-TRAC

Tru-Trac Rollers (Pty) Ltd. is the world's leading supplier of solutions relating to the problems encountered with tracking and aligning of conveyor belts. We supply a full range of self-aligning idlers for tracking both the return and load-carrying sides on slow moving, reversible, high-speed and high-load belts.

Established in 1995, Tru-Trac Rollers (Pty) Ltd quickly earned a reputation for innovation and quality.

The Tru-Trac Belt Tracking System, in particular, is a world leading innovation, which has received several design awards and having been patented in all major mining countries.

Today Tru-Trac Rollers (Pty) Ltd remains focused on innovation and has filed a number of further patents to protect our significant improvements and new developments. Our approach is to solve customer problems by gaining a clear understanding of their belt tracking requirements, and ensuring that our solutions meet those needs.

THE TRU-TRAC TRACKING SYSTEM

One of the biggest challenges facing any manufacturer of belt-tracking and training systems is that no two conveyor set-ups are alike. The ideal tracker must be versatile enough to work across different belt types and environments and in both wet and dry conditions.

After identifying the need in the market for a better tracker, Tru-Trac Rollers (Pty) Ltd examined the problems with existing belt trainers and combining that with the company's extensive experience, engineers set out to design a tracker. It was agreed that a good tracker system:

- Should operate in both dry and wet conditions.
- Should require minimum force to activate the tracking mechanism.
- Should not rely on the edge of the belt to activate the tracking mechanism.
- Should be maintenance free.
- Should have vibration free rolling action.
- Should have a minimum of working parts.
- Should be simple to install.
- Should have good traction with belt.
- Should be durable.

As a result of these imperatives, the Tru-Trac Flat-Return Tracker was developed. Since then the system has been judged a winner by the South African Bureau of Standards Design Awards for Engineering design in 1997. And the accolades keep coming. In 2002, the Tru-Trac Flat-Return Tracker was honoured with an award for innovation by the German Health & Safety Bureau.

PRODUCTS

All products are manufactured to exacting specifications, using only the highest quality components and materials. The company operates from its factory and offices in Centurion, South Africa, where all products are manufactured on product specific machinery.

Flat Return Tracker

The Tru-Trac employs a unique and highly effective tracking action, which is non-damaging to the belt and kicks-in immediately if the belt begins to drift off centre.

Because it does not rely on contact with the belt edge in order to guide the belt, belt edge damage, which occurs frequently with other tracking systems, is avoided.



The Tru-Trac has special tapers (similar to a crown pulley) on the outer edges of the tracker, which cause the drum of the Tru-Trac to pivot about an internal, vertical pivot axis. The internal central pivot is perpendicular to the belt and this results in the tracking action always being on the same horizontal plane as the belt. For this reason the Tru-Trac works equally well with reversible and shuttle conveyors.



The bearings are mounted in the bearing housings in both ends of the drum, to provide support for the roller drum over its full length. This ensures concentric vibration-free rotation. Each Tru-Trac uses a pair of 6017 2RS Bearings to facilitate the design (internal movement of the shaft within the inner sleeve) and, therefore, are well within their RPM and load specifications. This allows conveyor belts with speeds exceeding 7 m/s to be tracked. The centre pivot is unique and simple, consisting of a stainless steel pin within a solid mild steel centre shaft.

The combination of dissimilar materials in the centre pivot eliminates the likelihood of seizure.



As an added precaution, a nickel anti-seize

compound is added and the whole unit is seal-welded for life.

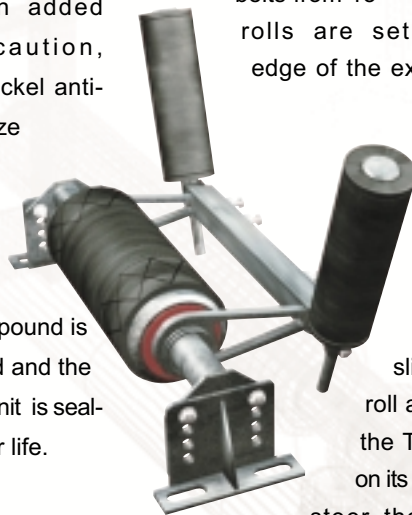
The drum of the Tru-Trac is rubberised in natural rubber, ensuring excellent contact and traction between the surfaces of the belt and tracker. We will also apply specific coatings, as per clients' requirements, where necessary.

The bearing housing, including front and back seal, has been specifically developed for the entire Tru-Trac product range, ensuring effective sealing in adverse conditions.

An adjustable mounting bracket has also been developed, allowing the Tru-Trac to be easily adapted to most stringer configurations. This same bracket enables the tension and, if necessary, the tracking angle to be adjusted.

Trough Tracker

The Trough Tracker was specifically developed to accommodate the load-carrying side of the belt. Obviously, due to the troughed nature of this side of the belt, a different tracking configuration was required. Wing rollers were incorporated into the design to activate our standard central pivot system. The activating wing rolls are set to have a maximum effective contact between the belt edge and the wing roller of 25°-55° (instead of the usual 90°), and are compatible with all troughed belts from 15° - 45°. These wing rolls are set to miss the edge of the existing troughed conveyor by between 5mm-10mm on either side. As the belt moves off-centre the belt slides up the wing roll and thus causes the Tru-Trac to pivot on its internal pivot and steer the belt back to centre with minimum force. The unique aspect of the Tru-Trac Trough Tracker is that the centre roll does all the steering and not the wing rolls, as this is where the most effective steering forces are exerted.



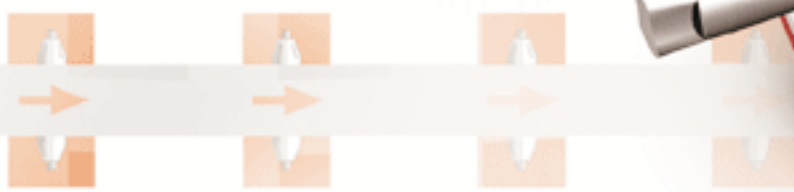
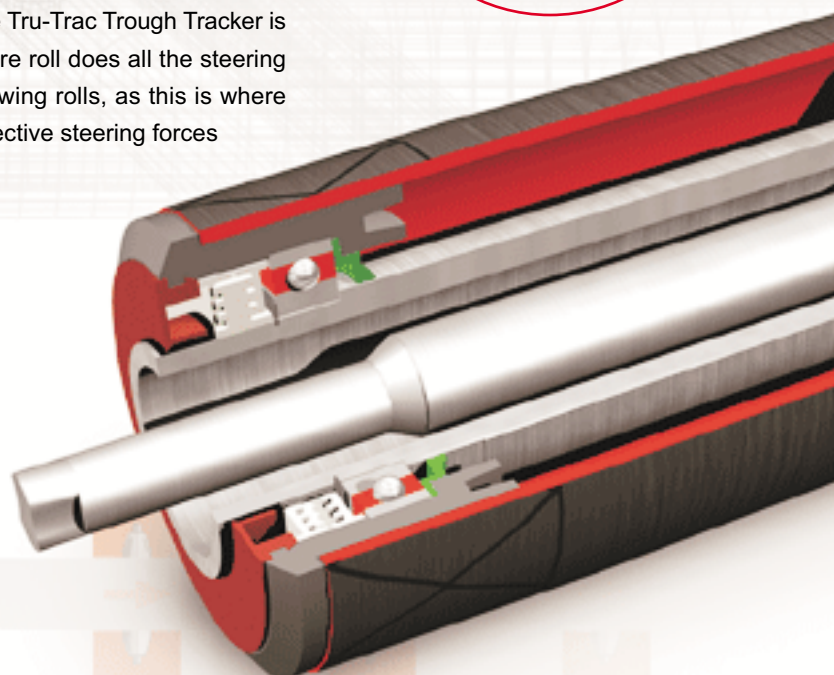
Dual Return Tracker

The Dual Return Tracker was developed to accommodate the excessive forces encountered with wide belts and heavy loads. An external central pivot mechanism was designed, obviating the need for a single, large drum, and enabling a concentric and balanced rotation to be achieved. Obviously, this results in extended bearing life and a very fast and effective tracking system.

Two separate tapered rolls are mounted onto the pivot mechanism, which can be individually replaced as wear occurs. The same award winning features that go into the Flat Return Tracker have been incorporated in the Dual Return Tracker.



ALL THREE OF THE TRU-TRAC DESIGNS HAVE RECEIVED PATENTS NOT ONLY IN SOUTH AFRICA, BUT IN NUMEROUS OTHER COUNTRIES, TOO, INCLUDING THE U.S.A. AND CANADA, EUROPE, THE U.K, AUSTRALIA AND CHINA, TO MENTION BUT A FEW.



GUIDELINES FOR INSTALLATION

The Tru-Trac idler need only be installed where misalignment occurs. As a rule of thumb, one tracker is sufficient to control and align 50 meters of belt. On longer belts, or those operating above ground, spacing may be increased up to 100 meters. Always install the Tru-Trac Flat Return or Dual Return before the problem area.

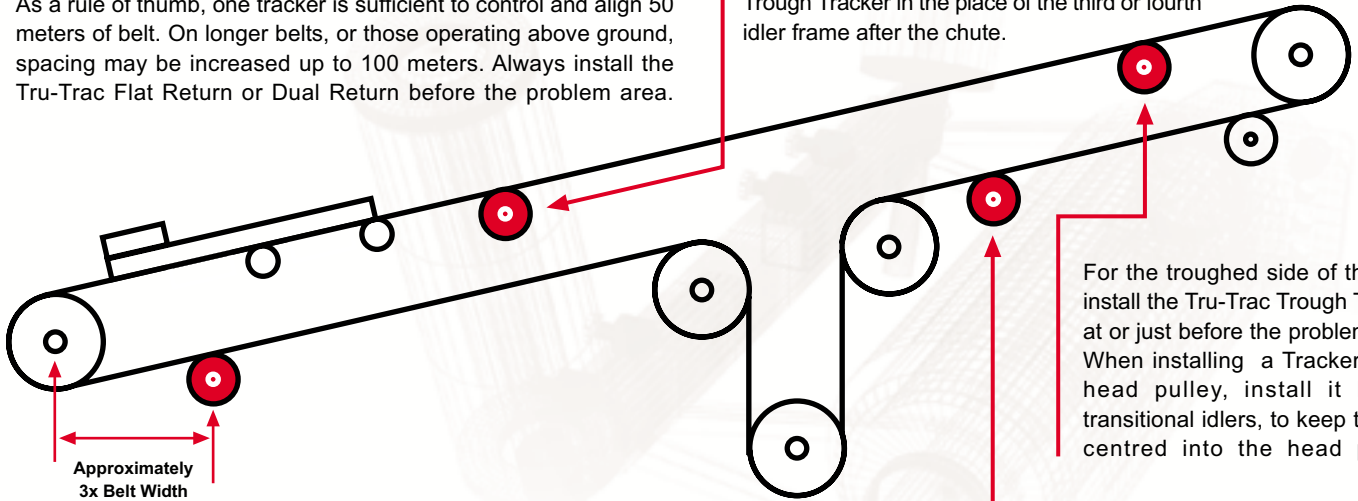
In event of skew loading, install the Tru-Trac Trough Tracker in the place of the third or fourth idler frame after the chute.

For the troughed side of the belt, install the Tru-Trac Trough Tracker at or just before the problem area. When installing a Tracker at the head pulley, install it before transitional idlers, to keep the belt centred into the head pulley.

One Tru-Trac Tracker is needed to keep the belt running centre through the (G.T.U.) Gravity Take-up Unit.

Approximately 3x Belt Width

For the most effective tracking, install the Tru-Trac Flat Return Tracker or Dual Return approximately three times the width of the belt in front of the problem area.



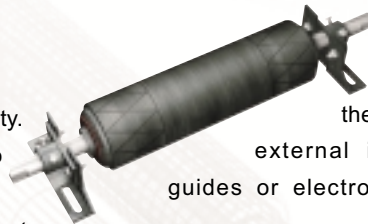
PRINCIPLES OF OPERATION

Flat Return Tracker

The beauty of the Tru-Trac is its simplicity. The tracker is essentially made up of two parts:- an inner, stationary drum, attached to a pin that allows it to pivot laterally, on exactly the same plane as the belt; and an outer drum, that rotates around the inner assembly. The outer drum is tapered towards either end, creating a slightly smaller diameter on the outside edges than in the middle.

As the belt begins to drift off centre it comes into contact with the tapered edge. Because of the smaller diameter involved, there is a change in forces, causing the tracker to pivot forwards around the pin described above. Naturally, with this change in orientation of the tracker, the belt is steered back towards the centre.

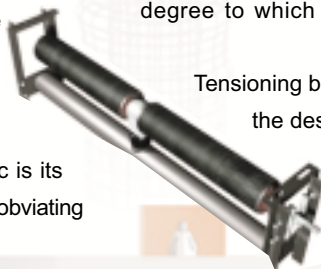
A major advantage of the Tru-Trac is its tendency to find its own equilibrium obviating



the need for any external intervention, guides or electronic sensors.

Dual Return Tracker

The Tru-Trac Dual Return Tracker operates on exactly the same principles as the Tru-Trac Flat Return Tracker. However, in order to keep the drum diameter to a manageable size, the centre pivot is located externally. The split configuration has resulted in a highly responsive tracking action as the individual tracking rolls can be easily replaced as wear occurs. Furthermore, the Dual Return Tracker offers the ability to set the degree to which the Tracker will swing.



Tensioning bolts are incorporated into the design, enabling the correct tension to easily be achieved.

Trough Tracker

The Tru-Trac Trough Tracker is used to align the load-carrying side of conveyor belts. Applying Tru-Trac Flat Return principles of tracking in the horizontal plane, wing rollers were incorporated into the design to activate our standard central pivot system. The design ensures that no 90° contact with belt-edge occurs. As the belt moves off-centre the belt slides up the wing roll and thus causes the Tru-Trac to pivot on its internal pivot and steer the belt back to centre with minimum force. The unique aspect of the Tru-Trac Trough Tracker is that the centre roll does all the steering, not the wing rolls, as this is where the most effective steering forces are exerted.



*F*EATURES AT A GLANCE

THE AWARD WINNING TRU-TRAC SYSTEM

- Simple to install
- Maintenance free
- No contact with the edge of the belt
- Vibration free rolling action
- Operates in all conditions
- Proven patented technology
- Operates on reversible belts
- Can be installed inside or under the belt

*A*DVANTAGES AT A GLANCE

SIMPLICITY IS AN ADVANTAGE:

- Improved safety
- Increased production and reduced downtime
- Reduced damage to conveyor belt edges and structures
- Increased conveyor life
- Reduced spillage and wastage
- Reduced labour involved in clearing spillages
- Reduced power consumption
- Reliable

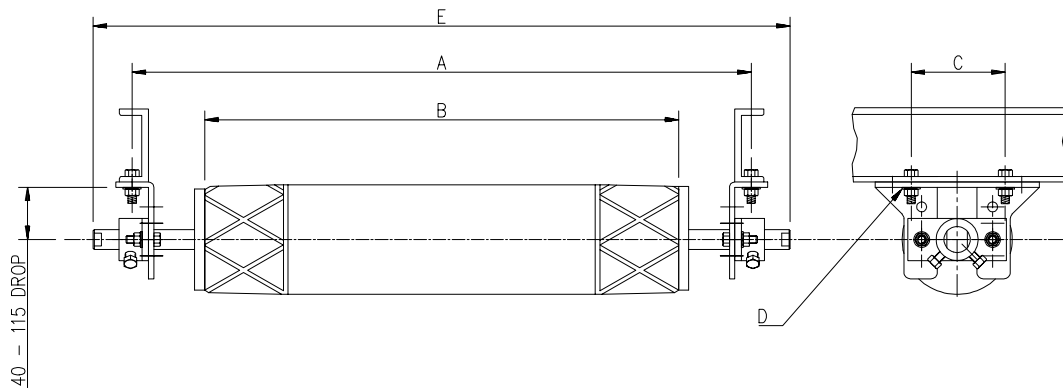


TECHNICAL DATA

Tru-Trac Flat Return Tracker



Available in 170 Dia Rolls



Compatible with both 90 & 45 Drops

Code	Belt width	A	B	C Min - Max	D (Slot)	E	Weight (Kg)
TTFR45	450	686	490	85 - 200	14 X 70	850	33
TTFR50	500	736	540	85 - 200	14 X 70	900	35
TTFR60	600	838	640	85 - 200	14 X 70	1000	37
TTFR65	650	890	690	85 - 200	14 X 70	1050	39
TTFR75	750	990	790	85 - 200	14 X 70	1150	42
TTFR80	800	1040	840	85 - 200	14 X 70	1200	45
TTFR90	900	1144	940	85 - 200	14 X 70	1300	49
TTFR100	1000	1240	1040	85 - 200	14 X 70	1400	52
TTFR105	1050	1296	1090	85 - 200	14 X 70	1450	53
TTFR120	1200	1448	1240	85 - 200	14 X 70	1600	59
TTFR135	1350	1600	1390	85 - 200	14 X 70	1780	71
TTFR140	1400	1700	1440	85 - 200	14 X 70	1830	74
TTFR150	1500	1752	1540	85 - 200	14 X 70	1930	78

All dimensions in mm

Non standard trackers can be made to customer specifications

TRU-TRAC ROLLERS (PTY) LTD

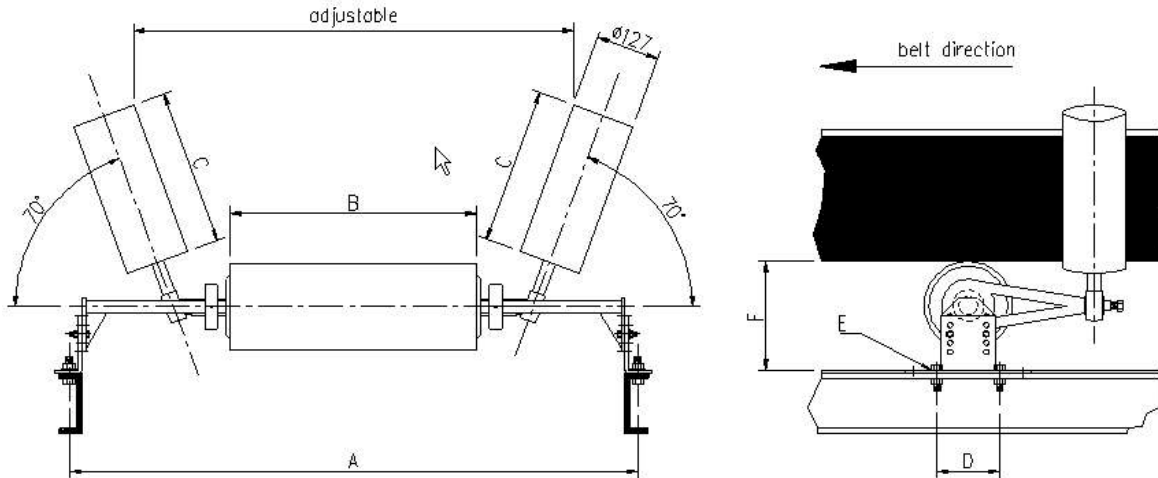
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Email: info@tru-trac.com PO Box 8707 Centurion 0046

TECHNICAL DATA

Tru-Trac Trough Tracker



Available in 170 Dia Rolls



Compatible with all troughing angles

Code	Belt width	A	B	C	D Min - Max	E (Slot)	F Min - Max	Weight (Kg)
TTT45	450	686	265	240	100 – 160	16 x 45	200 – 300	34
TTT50	500	736	265	240	100 – 160	16 x 45	200 – 300	34
TTT60	600	838	365	240	100 – 160	16 x 45	200 – 300	43
TTT65	650	890	365	240	100 – 160	16 x 45	200 – 300	43
TTT75	750	990	365	240	100 – 160	16 x 45	200 – 300	44
TTT80	800	1040	365	240	100 – 160	16 x 45	200 – 300	44
TTT90	900	1144	465	340	170 – 300	20 x 80	210 – 330	55
TTT100	1000	1240	465	340	170 – 300	20 x 80	210 – 330	55
TTT105	1050	1296	465	340	170 – 300	20 x 80	210 – 330	56
TTT120	1200	1448	465	340	170 – 300	20 x 80	210 – 330	57
TTT135	1350	1600	640	450	170 – 300	20 x 80	210 – 330	75
TTT140	1400	1700	640	450	170 – 300	20 x 80	210 – 330	78
TTT150	1500	1752	640	450	170 – 300	20 x 80	210 – 330	82
TTT160	1600	1900	640	450	170 – 300	20 x 80	210 – 330	116
TTT165	1650	1904	640	450	170 – 300	20 x 80	210 – 330	121
TTT180	1800	2058	640	450	170 – 300	20 x 80	210 – 330	130

All dimensions in mm

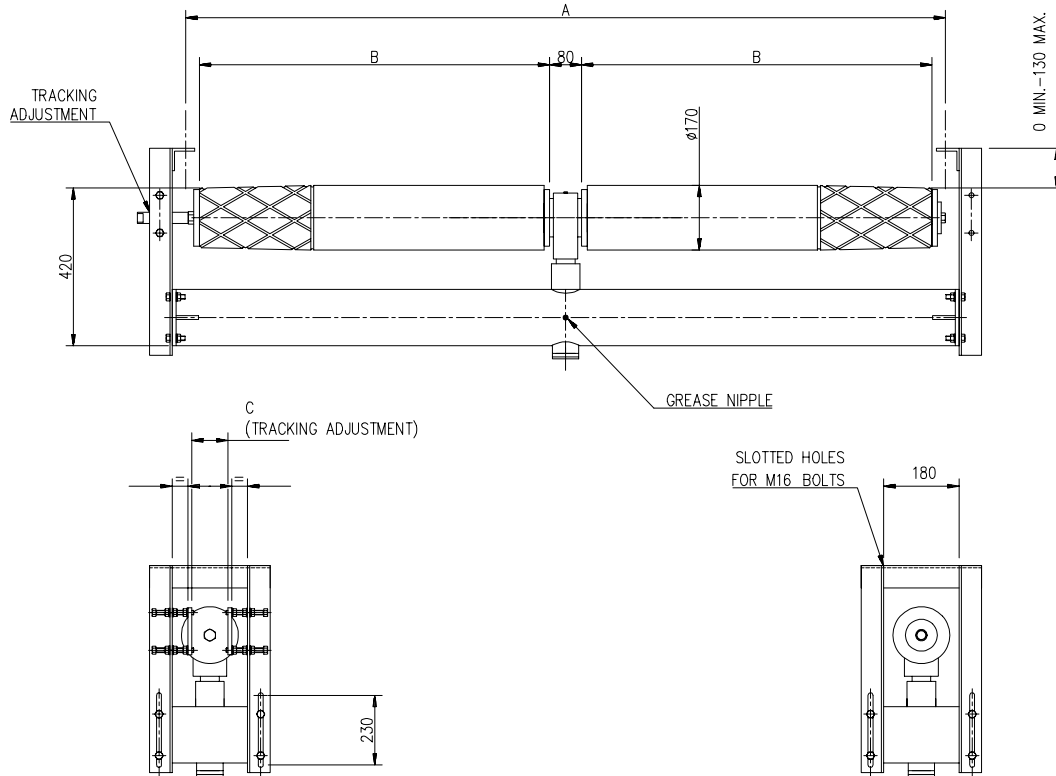
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TECHNICAL DATA

Tru-Trac Dual Return Tracker



Code	Belt width	A	B	C (For ideal included Angle = 4, 5°)	Weight (Kg)
TTDR135	1350	1600	675	92	132
TTDR140	1400	1700	725	94	134
TTDR150	1500	1752	750	98	139
TTDR160	1600	1900	825	102	143
TTDR165	1650	1904	825	104	145
TTDR180	1800	2058	900	110	165
TTDR200	2000	2210	1010	118	169
TTDR210	2100	2362	1060	122	173
TTDR220	2200	2420	1110	126	178
TTDR230	2300	2515	1160	130	181
TTDR240	2400	2668	1210	134	185
TTDR250	2500	2770	1260	138	190
TTDR260	2600	2820	1280	142	195

All dimensions in mm

Non standard trackers can be made to customer specifications

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