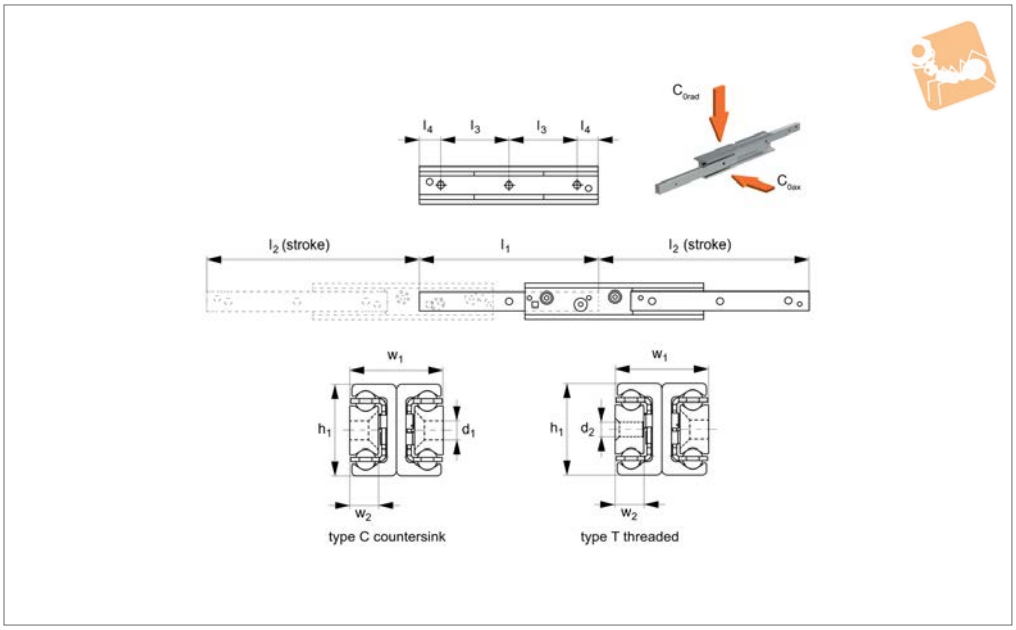


L1986.43

Material
Cold drawn bearing steel raceways hardened to 60 HRc. Balls - hardened steel.
Zinc coating to ISO2081 (excluding race-ways). Corrosion resistant coatings available on request.

Technical Notes
These are extremely strong and rigid teles-copic slides with high load capacities. C_{0rad} is the load rating for a single telescopic slide.
Temperature range: -30°C to +170°C.

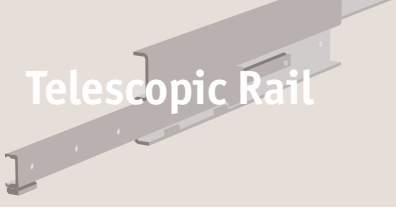
Tips
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in the opposite direction it will catch the intermediate member and force it to return.
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.
Only to be used for horizontal movements.
Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	w_2	For screws d_1 & d_2	No. of holes	Hole type	Load (per rail) C_0 ax N max.	Load (per rail) C_0 rad N max.	Weight kg
L1986.43C-0210	43	210	246	80	25	44	13,5	8,5	3	C'sunk	424	605	2,20
L1986.43C-0290	43	290	316	80	25	44	13,5	8,5	4	C'sunk	780	1114	3,04
L1986.43C-0370	43	370	416	80	25	44	13,5	8,5	5	C'sunk	910	1300	3,88
L1986.43C-0450	43	450	486	80	25	44	13,5	8,5	6	C'sunk	1279	1828	4,72
L1986.43C-0530	43	530	556	80	25	44	13,5	8,5	7	C'sunk	1434	2375	5,56
L1986.43C-0610	43	610	626	80	25	44	13,5	8,5	8	C'sunk	1300	2934	6,40
L1986.43C-0690	43	690	726	80	25	44	13,5	8,5	9	C'sunk	1096	3091	7,24
L1986.43C-0770	43	770	796	80	25	44	13,5	8,5	10	C'sunk	1016	3055	8,08
L1986.43C-0850	43	850	866	80	25	44	13,5	8,5	11	C'sunk	946	2847	8,92
L1986.43C-0930	43	930	966	80	25	44	13,5	8,5	12	C'sunk	833	2506	9,97
L1986.43C-1010	43	1010	1036	80	25	44	13,5	8,5	13	C'sunk	786	2364	10,60
L1986.43C-1090	43	1090	1106	80	25	44	13,5	8,5	14	C'sunk	744	2238	11,44
L1986.43C-1170	43	1170	1206	80	25	44	13,5	8,5	15	C'sunk	672	2022	12,28
L1986.43C-1250	43	1250	1276	80	25	44	13,5	8,5	16	C'sunk	641	1928	13,12
L1986.43C-1330	43	1330	1376	80	25	44	13,5	8,5	17	C'sunk	587	1766	13,96
L1986.43C-1410	43	1410	1446	80	25	44	13,5	8,5	18	C'sunk	563	1694	14,80
L1986.43C-1490	43	1490	1516	80	25	44	13,5	8,5	19	C'sunk	541	1628	15,64
L1986.43C-1570	43	1570	1586	80	52	44	13,5	8,5	20	C'sunk	521	1567	16,48
L1986.43C-1650	43	1650	1686	80	25	44	13,5	8,5	21	C'sunk	485	1458	17,32
L1986.43C-1730	43	1730	1756	80	25	44	13,5	8,5	22	C'sunk	468	1409	18,16
L1986.43C-1810	43	1810	1856	80	25	44	13,5	8,5	23	C'sunk	439	1320	19,00
L1986.43C-1890	43	1890	1926	80	25	44	13,5	8,5	24	C'sunk	425	1280	19,84
L1986.43C-1970	43	1970	2026	80	25	44	13,5	8,5	25	C'sunk	401	1206	20,68
L1986.43T-0210	43	210	246	80	25	44	13,5	8,5	3	Thread	424	605	2,20
L1986.43T-0290	43	290	316	80	25	44	13,5	8,5	4	Thread	780	1114	3,04

Fully Telescopic Slides

size 43

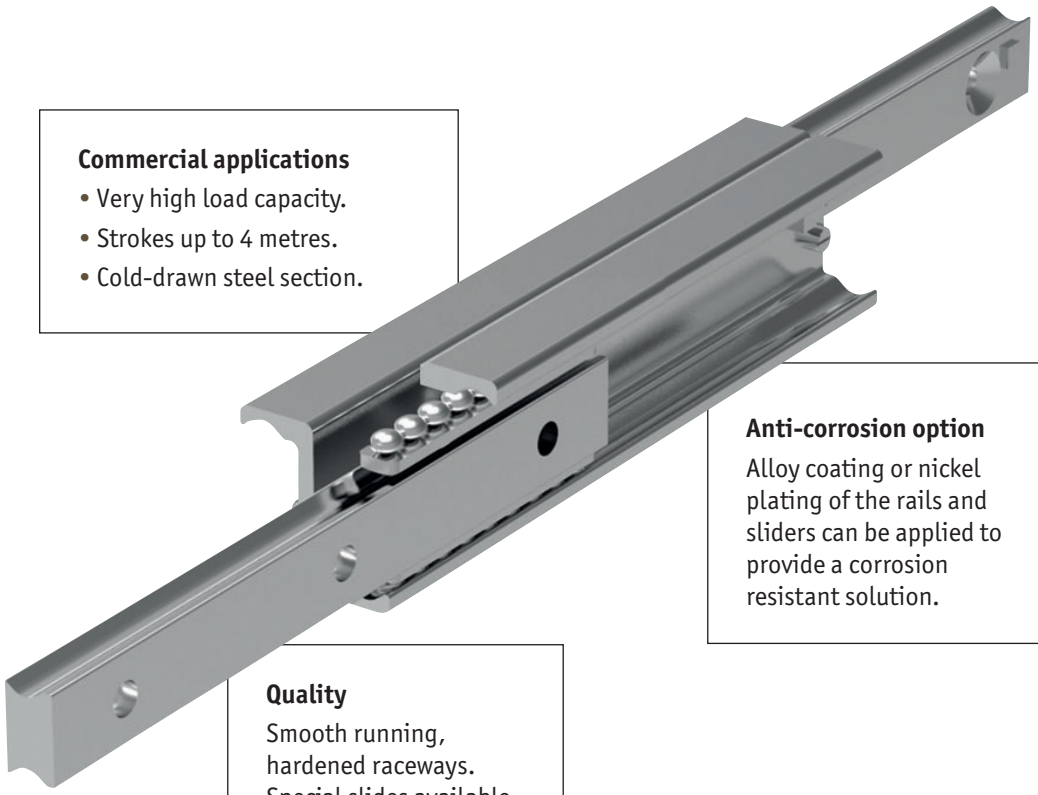
Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	w_2	For screws d_1 & d_2	No. of holes	Hole type	Load (per rail) C_0 ax N max.	Load (per rail) C_0 rad N max.	Weight kg
L1986.43T-0370	43	370	416	80	25	44	13,5	8,5	5	Thread	910	1300	3,88
L1986.43T-0450	43	450	486	80	25	44	13,5	8,5	6	Thread	1279	1828	4,72
L1986.43T-0530	43	530	556	80	25	44	13,5	8,5	7	Thread	1434	2375	5,56
L1986.43T-0610	43	610	626	80	25	44	13,5	8,5	8	Thread	1300	2934	6,40
L1986.43T-0690	43	690	726	80	25	44	13,5	8,5	9	Thread	1096	3091	7,24
L1986.43T-0770	43	770	796	80	25	44	13,5	8,5	10	Thread	1016	3055	8,08
L1986.43T-0850	43	850	866	80	25	44	13,5	8,5	11	Thread	946	2847	8,92
L1986.43T-0930	43	930	966	80	25	44	13,5	8,5	12	Thread	833	2506	9,97
L1986.43T-1010	43	1010	1036	80	25	44	13,5	8,5	13	Thread	786	2364	10,60
L1986.43T-1090	43	1090	1106	80	25	44	13,5	8,5	14	Thread	744	2238	11,44
L1986.43T-1170	43	1170	1206	80	25	44	13,5	8,5	15	Thread	672	2022	12,28
L1986.43T-1250	43	1250	1276	80	25	44	13,5	8,5	16	Thread	641	1928	13,12
L1986.43T-1330	43	1330	1376	80	25	44	13,5	8,5	17	Thread	587	1766	13,96
L1986.43T-1410	43	1410	1446	80	25	44	13,5	8,5	18	Thread	563	1694	14,80
L1986.43T-1490	43	1490	1516	80	25	44	13,5	8,5	19	Thread	541	1628	15,64
L1986.43T-1570	43	1570	1586	80	25	44	13,5	8,5	20	Thread	521	1567	16,48
L1986.43T-1650	43	1650	1686	80	25	44	13,5	8,5	21	Thread	485	1458	17,32
L1986.43T-1730	43	1730	1756	80	25	44	13,5	8,5	22	Thread	468	1409	18,16
L1986.43T-1810	43	1810	1856	80	25	44	13,5	8,5	23	Thread	439	1320	19,00
L1986.43T-1890	43	1890	1926	80	25	44	13,5	8,5	24	Thread	425	1280	19,84
L1986.43T-1970	43	1970	2026	80	25	44	13,5	8,5	25	Thread	401	1206	20,68



If you are looking for heavy duty, quality telescopic rails for industrial or commercial applications then these are the rails for you!

The best heavy duty telescopic slides on the market

These are unique rails that are not made from pressed steel but from cold-drawn steel section. The rails can take high loads, with very long strokes, with repeated use, low deflection and minimal play.



Commercial applications

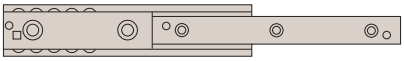
- Very high load capacity.
- Strokes up to 4 metres.
- Cold-drawn steel section.

Anti-corrosion option

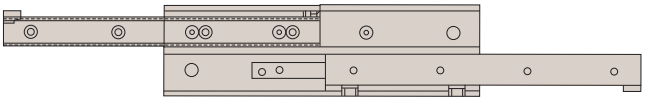
Alloy coating or nickel plating of the rails and sliders can be applied to provide a corrosion resistant solution.

Quality

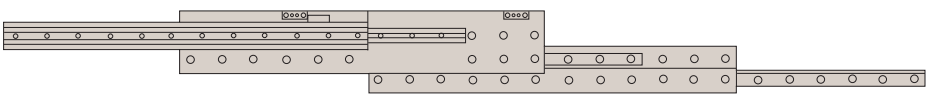
Smooth running, hardened raceways. Special slides available.



Partial Stroke (~60%)



Full Stroke (~100%)

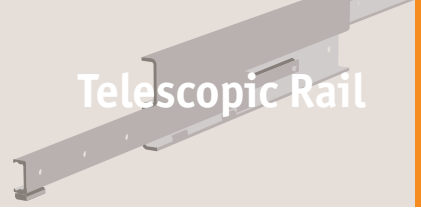


Over-extension (150%)

Rail types

Our range of telescopic rails covers partial, full stroke and over-extension.

For more information refer to our product specifications pages or call our technical department.



Telescopic Rail

Specifications and applications

Specifications

- Generally all our telescopic rails have induction hardened raceways.
- Cold drawn roller bearing steel.
- Maximum operating speed 0,8 m/s.
- Temperature range (mainly -30°C to +170°C).
- Electrolytic galvanised to ISO 2081, other anti-corrosion finishes on request.
- High load ratings with low deflection characteristics.
- Minimum play (even at maximum load ratings).
- Smooth, free running movement.
- Long strokes and heavy load ratings.
- Can be used in horizontal applications only (due to the use of a ball cage), with the exception of part number L1985 which uses roller bearings.
- Light duty "cage stops" are included on the telescopic rails to prevent damage to the ball cage. External end stops must be designed into your application (to protect the rails from high forces and possible damage on opening and closing).
- For telescopic rails with an "upper" and "lower" rail, the moving rail should be the lower one. Using the upper rail as the moving element effects the smooth running and the load capacity of the telescopic sliders.
- All load capacity figures are given for a single rail, and based on continuous use.
- Fix to structures using screws of strength class 10,9.
- Anti-corrosion option. We have a highly effective anti-corrosive coating option, and we utilise stainless steel ball bearings in this version.

Applications

Special purpose & packaging machines
Precision positioning systems
handling units
robotic systems • cutting machines

Seating
Sliding seats
disability ramps
seat extensions

Safety guarding
Extending protective systems
sliding gates
automatic pick & place

Logistics solutions
Container extensions
heavy duty extending systems
sliding doors

Disability vehicles
Sliding seats
extension ramps

Transport (naval)
Sliding hatches
pull-out storage

Transport (rail)
Seat adjustment
sliding doors
battery removal units

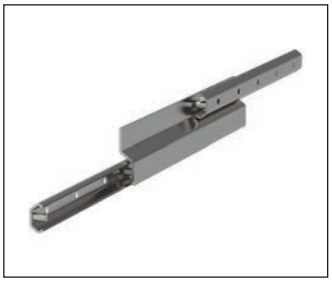
Transport (automotive)
Ambulance sliding systems
fire fighting vehicles
sliding panels

Transport (military)
Sliding seats
protective hatches
stretcher extensions

ov-telescopic-rail-specifications-applications-lmh - Updated - 03-03-2023

L1989 - these are full extension slides made from 316L stainless steel. For use in applications where corrosion may be a problem.

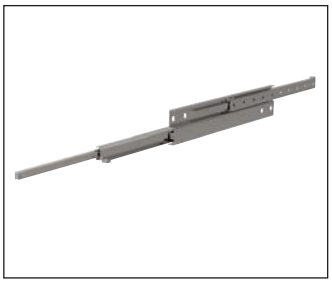
Standard extension	100%
Special extension range	No
Single & double direction?	No
Number of rail sizes	1
Maximum extension (at 100%)	1120 mm
Maximum load (per rail)	35 Kg



Extended stroke telescopic rails

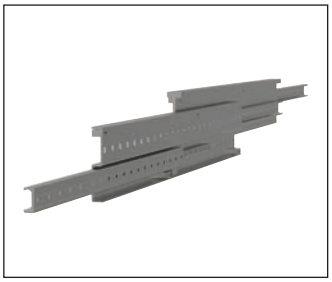
L1997 - these are extended stroke (150%), heavy duty telescopic rails, with high load capacity and stiffness.

Standard extension	150%
Special extension range	On request
Single & double direction?	No
Number of rail sizes	1
Maximum extension (at 150%)	3030 mm
Maximum load (per rail)	240 Kg



L1998 - these are extended stroke (150%), heavy duty telescopic rails. They have a solid steel intermediate element. They are our heaviest duty extended stroke units.

Standard extension	150%
Special extension range	On request
Single & double direction?	No
Number of rail sizes	1
Maximum extension (at 150%)	3020 mm
Maximum load (per rail)	480 Kg



Service life

The service life is defined as the time span between commissioning and the first fatigue or wear indications on the raceway. The service life of a telescopic rail is dependent on several factors, such as the effective load, the installation precision, occurring shocks and vibrations, the operating temperature, the ambient conditions and the lubrication.
Calculation of the service life is based exclusively on the loaded rows of balls.

In practice, the decommissioning of the bearing, due to its destruction or extreme wear of a component, represents the end of service life.

This is taken into account by an application coefficient (f_i), so the service life consists of:

$$L_{Km} = 100 \cdot \left(\frac{\delta}{W} \cdot \frac{1}{f_i} \right)^3$$

L = calculated service life in Km
δ = load capacity factor in N (see tables on following pages)
W = equivalent load in N
f_i = application coefficient

Application coefficient f_i

Operating conditions	Safety factor (.fi)
Neither shocks or vibrations, smooth and low-frequency direction change, clean environment	1,3 - 1,8
Light vibrations and average direction change	1,8 - 2,3
Shocks and vibrations, high-frequency direction change, very dirty environment	2,3 - 3,5

If the external load, P, is the same as the dynamic load capacity, C_{0rad} (which of course must never be exceeded), the service life at ideal operating conditions ($f_i = 1$) is 100Km.

For a single load P, the following applies: W = P.

If several external loads occur simultaneously, the equivalent load is calculated as follows:

$$W = P_{rad} + \left(\frac{P_{ax}}{C_{0ax}} + \frac{M_1}{M_x} + \frac{M_2}{M_y} + \frac{M_3}{M_z} \right) \cdot C_{0rad}$$