



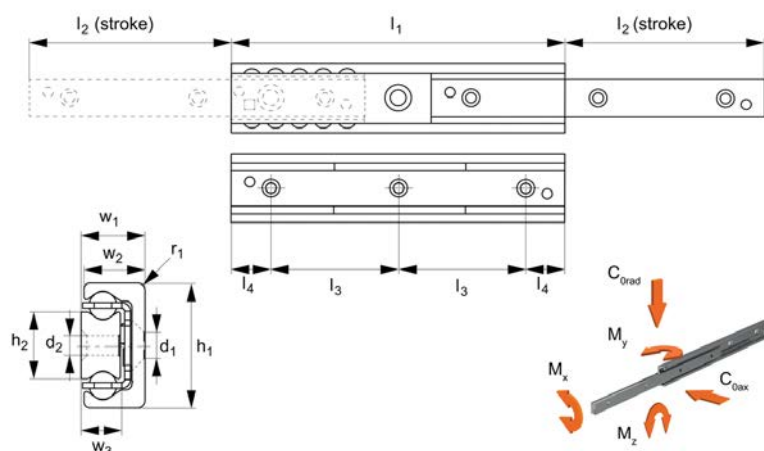
Partially Telescopic Slides

size 35

Telescopic Slides



L1994.35



Material

Cold drawn bearing steel raceways hardened to 60 HRC. Balls - hardened steel.

Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings available on request.

Technical Notes

These are extremely strong and rigid telescopic slides with high load capacities, offering a semi-telescopic movement. C_{0rad} is the load rating for a single telescopic slide.

They have very low deflection characteristics.

Weight 3,05 Kg/m.

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.

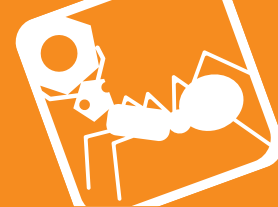
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.

Special strokes up to 65% of the closed length can be provided on request.

Important Notes

$d_1 = \emptyset 6.5$ and $d_2 = M6$
 $r = 2$.

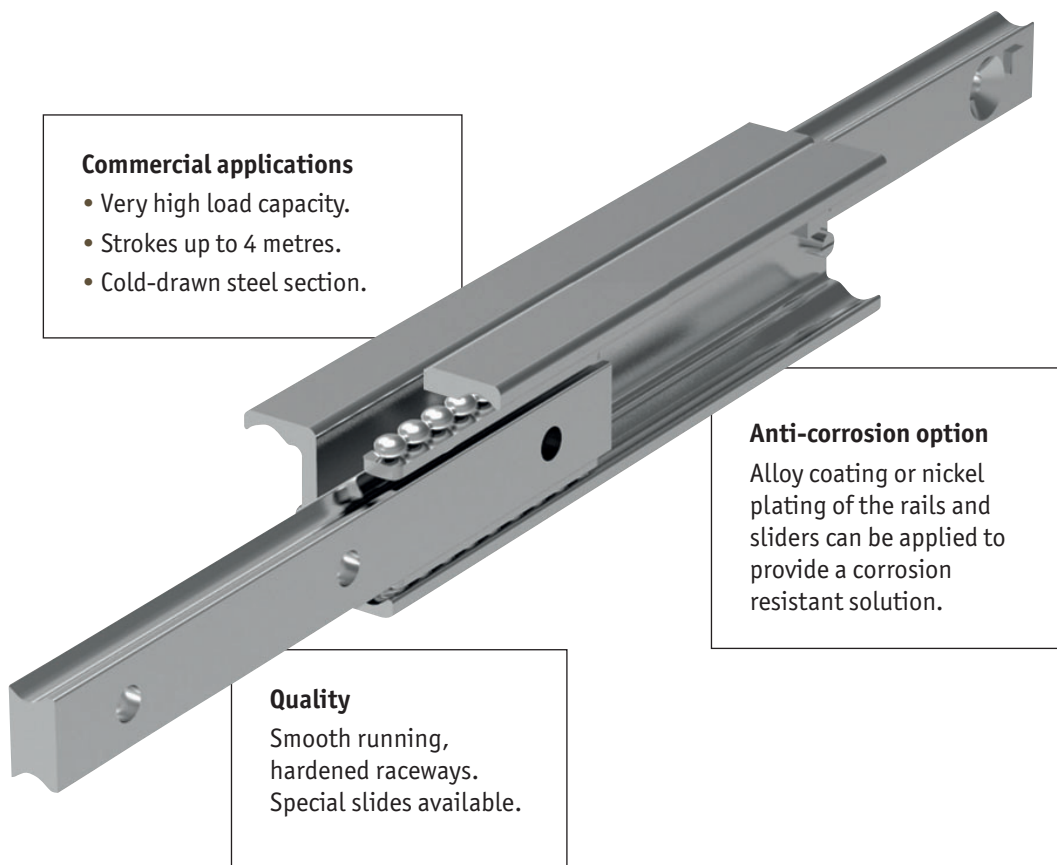
Order No.	l_1	l_2 stroke	h_1	w_1	l_3	l_4	h_2	w_2	w_3	No. of holes	Load (per rail) C_{0ax} N max.	Load (per rail) C_{0rad} N max.	M_x Nm max.	M_y Nm max.	M_z Nm max.	Weight kg
L1994.35-0210	210	127	35	17	80	25	15,8	16,5	10	3	763	1090	37	63	90	0,63
L1994.35-0290	290	159	35	17	80	25	15,8	16,5	10	4	1471	2101	56	155	218	0,87
L1994.35-0370	370	203	35	17	80	25	15,8	16,5	10	5	1880	2686	69	247	348	1,11
L1994.35-0450	450	247	35	17	80	25	15,8	16,5	10	6	2289	3271	80,5	365	515	1,35
L1994.35-0530	530	279	35	17	80	25	15,8	16,5	10	7	3045	4350	101	553	787	1,59
L1994.35-0610	610	323	35	17	80	25	15,8	16,5	10	8	3452	4932	113	722	1027	1,85
L1994.35-0690	690	367	35	17	80	25	15,8	16,5	10	9	3860	5514	125	914	1296	2,07
L1994.35-0770	770	399	35	17	80	25	15,8	16,5	10	10	4629	6614	143,5	1203	1711	2,31
L1994.35-0850	850	443	35	17	80	25	15,8	16,5	10	11	5035	7192	157	1446	2063	2,55
L1994.35-0930	930	487	35	17	80	25	15,8	16,5	10	12	5440	7773	170	1713	2441	2,79
L1994.35-1010	1010	519	35	17	80	25	15,8	16,5	10	13	6218	8882	186	2104	3002	3,03
L1994.35-1090	1090	563	35	17	80	25	15,8	16,5	10	14	6609	9504	201	24122	3457	3,27
L1994.35-1170	1170	607	35	17	80	25	15,8	16,5	10	15	7026	10037	215	2764	3946	3,51
L1994.35-1250	1250	639	35	17	80	25	15,8	16,5	10	16	7798	11288	232	3256	4648	3,75
L1994.35-1330	1330	683	35	17	80	25	15,8	16,5	10	17	8209	11728	244,5	3652	5211	3,99
L1994.35-1410	1410	727	35	17	80	25	15,8	16,5	10	18	8726	12338	257	4070	5809	3,99
L1994.35-1490	1490	759	35	17	80	25	15,8	16,5	10	19	9396	13423	273	4663	6654	4,47



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.



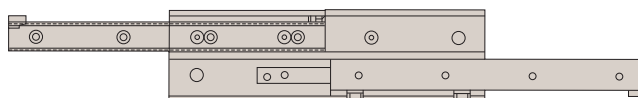
Rail types

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

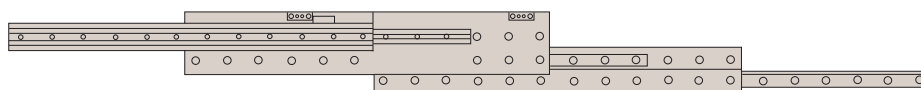
For more information refer to our product specifications pages or call our technical department.



Partial Stroke (~60%)



Full Stroke (~100%)



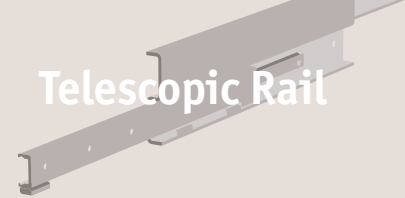
Over-extension (150%)



Telescopic Rail

Specifications and applications

Telescopic Rail



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





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

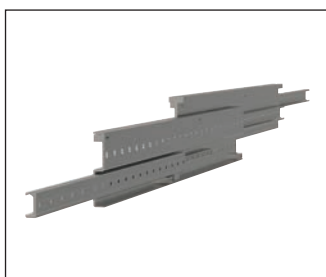
Extended stroke telescopic rails

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 (f_i)
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:

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