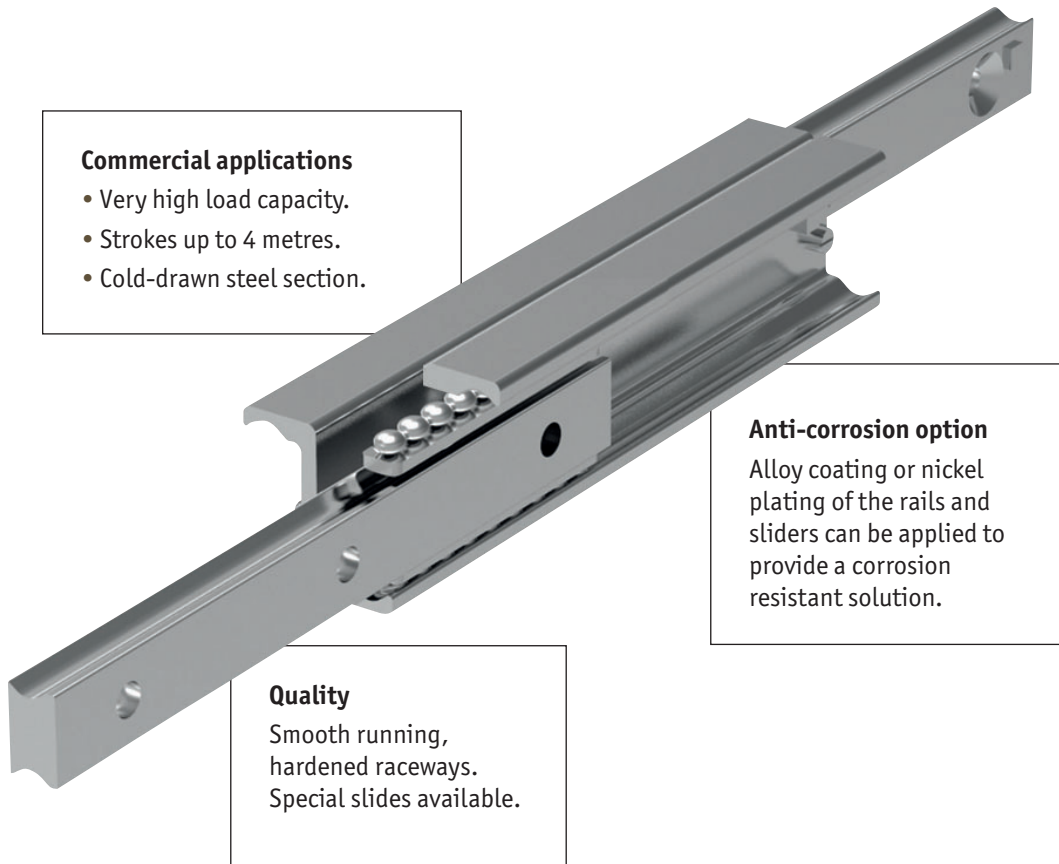


If you are looking for heavy duty, quality telescopic rails for industrial or commercial applications then these are the rails for you!

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

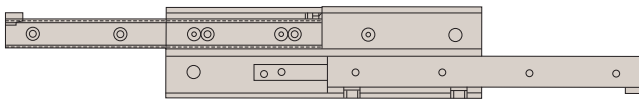
Alloy coating or nickel plating of the rails and sliders can be applied to provide a corrosion resistant solution.

Quality

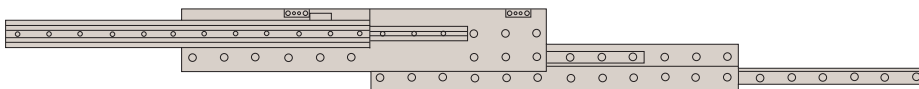
Smooth running, hardened raceways. Special slides available.



Partial Stroke (~60%)



Full Stroke (~100%)



Over-extension (150%)

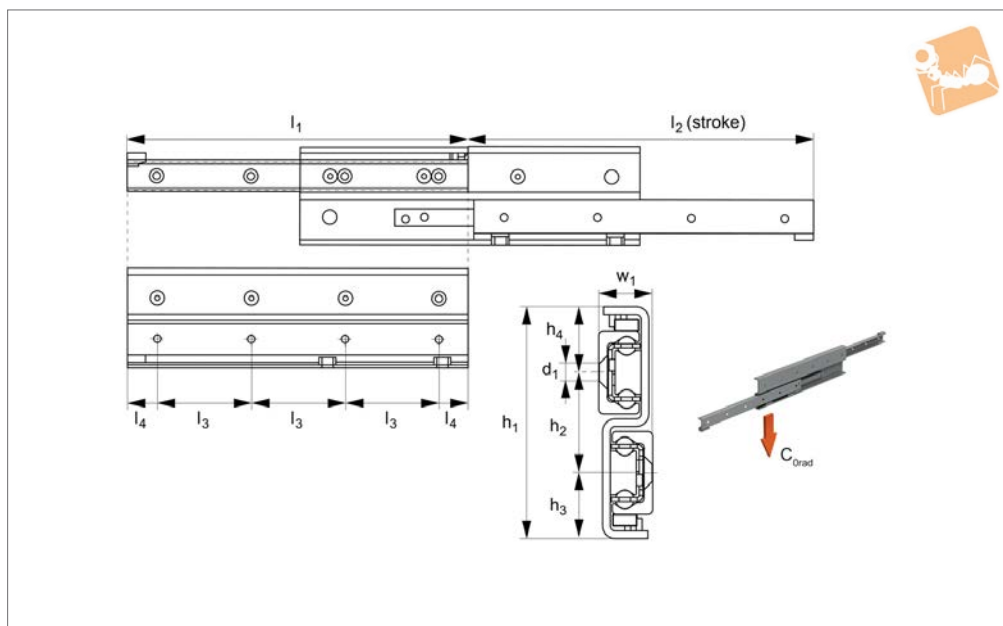
Rail types

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.



L1984.28S



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 teles-

copic slides with high load capacities and have very low deflection characteristics. Temperature range: -30°C to +110°C. This is the single direction stroke version - the moving member can extend out of only one side of the slide. Moving rail must be lower rail (unless technical department consulted).

C_{0rad} is the load rating for a single teles-

copic slide.

Tips

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

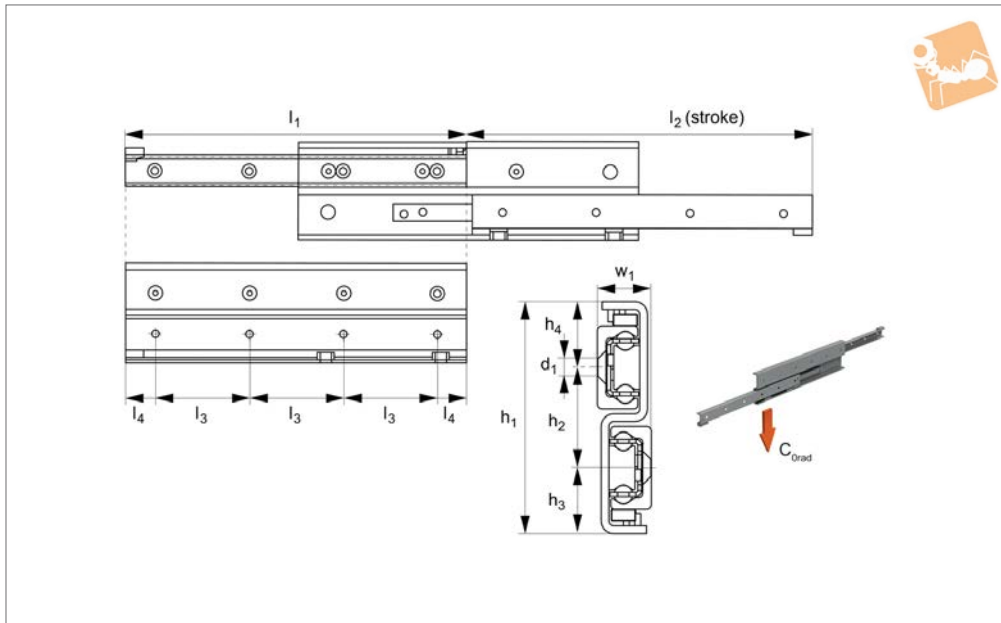
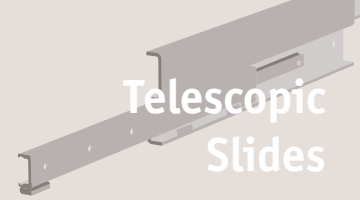
Special strokes up to 130% of the closed length can be provided on request. Only to be used for horizontal movements.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2 stroke	l_3	l_4	w_1	For screws d_1	Accessible holes/total	Load (per rail) C_{0rad} N max.	Weight kg
L1984.28S-0290	84	35	24,5	24,5	290	296	80	25	17	M5	3/4	570	1,9
L1984.28S-0370	84	35	24,5	24,5	370	380	80	25	17	M5	4/5	769	2,4
L1984.28S-0450	84	35	24,5	24,5	450	464	80	25	17	M5	4/6	969	2,9
L1984.28S-0530	84	35	24,5	24,5	530	548	80	25	17	M5	6/7	1170	3,4
L1984.28S-0610	84	35	24,5	24,5	610	630	80	25	17	M5	6/8	1376	3,9
L1984.28S-0690	84	35	24,5	24,5	690	714	80	25	17	M5	7/9	1577	4,4
L1984.28S-0770	84	35	24,5	24,5	770	798	80	25	17	M5	7/10	1778	4,9
L1984.28S-0850	84	35	24,5	24,5	850	864	80	25	17	M5	9/11	2111	5,4
L1984.28S-0930	84	35	24,5	24,5	930	950	80	25	17	M5	9/12	2240	5,6
L1984.28S-1010	84	35	24,5	24,5	1010	1034	80	25	17	M5	10/13	2054	6,4
L1984.28S-1090	84	35	24,5	24,5	1090	1118	80	25	17	M5	10/14	1896	7,0
L1984.28S-1170	84	35	24,5	24,5	1170	1202	80	25	17	M5	12/15	1761	7,4
L1984.28S-1250	84	35	24,5	24,5	1250	1266	80	25	17	M5	12/16	1695	8,0
L1984.28S-1330	84	35	24,5	24,5	1330	1350	80	25	17	M5	13/17	1586	8,5
L1984.28S-1410	84	35	24,5	24,5	1410	1434	80	25	17	M5	13/18	1490	9,0
L1984.28S-1490	84	35	24,5	24,5	1490	1518	80	25	17	M5	15/19	1405	9,5



Fully Telescopic Slides, size 35

single direction stroke



L1984.35S

TELESCOPIC SLIDES

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 teles-

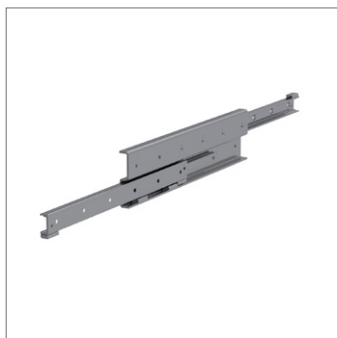
copic slides with high load capacities and have very low deflection characteristics. Temperature range: -30°C to +110°C. This is the single direction stroke version - the moving member can extend out of only one side of the slide. Moving rail must be lower rail (unless technical department consulted). C_{0rad} is the load rating for a single teles-

copic slide.

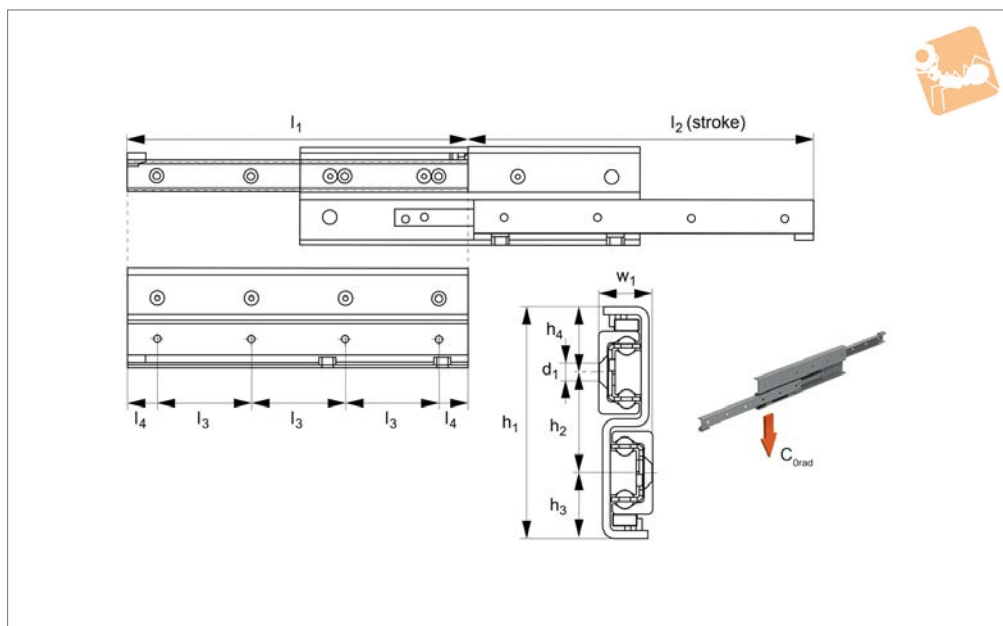
Tips

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 130% of the closed length can be provided on request. Only to be used for horizontal movements.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2 stroke	l_3	l_4	w_1	For screws d_1	Accessible holes/total	Load (per rail) C_{0rad} N max.	Weight kg
L1984.35S-0450	104	43	30,5	30,5	450	494	80	25	22,5	M6	5/6	1250	4,5
L1984.35S-0530	104	43	30,5	30,5	530	558	80	25	22,5	M6	6/7	1685	5,4
L1984.35S-0610	104	43	30,5	30,5	610	646	80	25	22,5	M6	6/8	1908	6,2
L1984.35S-0690	104	43	30,5	30,5	690	734	80	25	22,5	M6	7/9	2132	9,9
L1984.35S-0770	104	43	30,5	30,5	770	798	80	25	22,5	M6	8/10	2579	7,7
L1984.35S-0850	104	43	30,5	30,5	850	886	80	25	22,5	M6	9/11	2801	8,9
L1984.35S-0930	104	43	30,5	30,5	930	974	80	25	22,5	M6	9/12	3024	9,4
L1984.35S-1010	104	43	30,5	30,5	1010	1038	80	25	22,5	M6	10/13	3476	10,2
L1984.35S-1090	104	43	30,5	30,5	1090	1126	80	25	22,5	M6	11/14	3508	11,0
L1984.35S-1170	104	43	30,5	30,5	1170	1214	80	25	22,5	M6	12/15	3240	11,8
L1984.35S-1250	104	43	30,5	30,5	1250	1278	80	25	22,5	M6	12/16	3121	12,6
L1984.35S-1330	104	43	30,5	30,5	1330	1366	80	25	22,5	M6	13/17	2907	13,4
L1984.35S-1410	104	43	30,5	30,5	1410	1454	80	25	22,5	M6	14/18	2721	14,2
L1984.35S-1490	104	43	30,5	30,5	1490	1518	80	25	22,5	M6	15/19	2636	15,0
L1984.35S-1570	104	43	30,5	30,5	1570	1606	80	25	22,5	M6	15/20	2482	15,9
L1984.35S-1650	104	43	30,5	30,5	1650	1694	80	25	22,5	M6	16/21	2345	16,6
L1984.35S-1730	104	43	30,5	30,5	1730	1758	80	30,5	22,5	M6	17/22	2282	17,5



L1984.43S



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 teles-

copic slides with high load capacities and have very low deflection characteristics. Temperature range: -30°C to +110°C. This is the single direction stroke - the moving member can extend out of only one side of the slide.

Moving rail must be lower rail (unless technical department consulted).

C_{Orad} is the load rating for a single teles-

copic slide.

Tips

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 130% of the closed length can be provided on request.

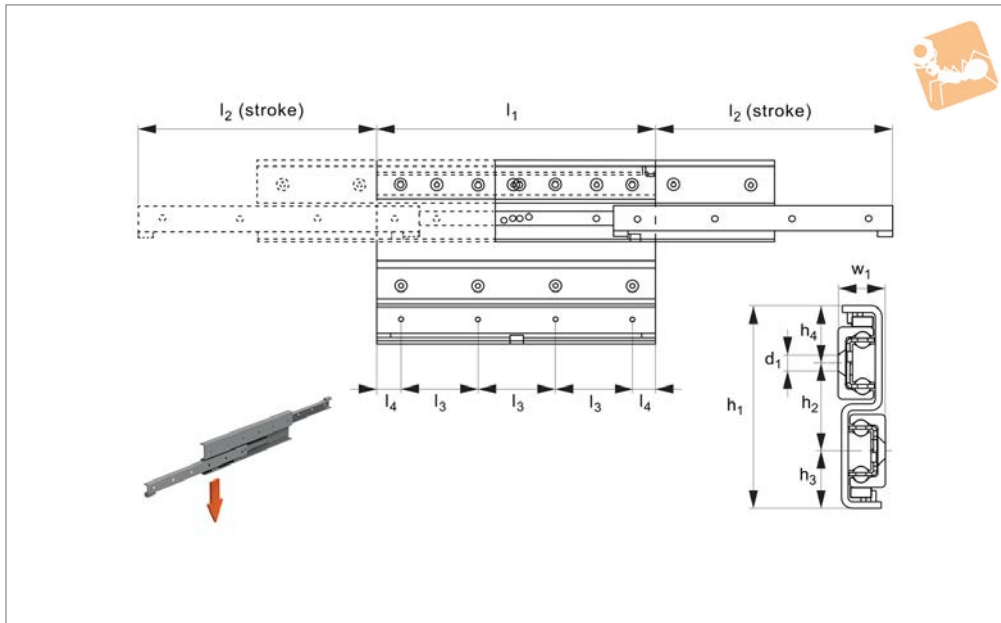
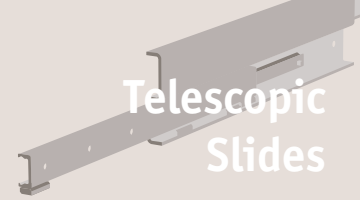
Only to be used for horizontal movements.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2 stroke	l_3	l_4	w_1	For screws d_1	Accessible holes/ total	Load (per rail) N max.	C_{Orad}	Weight kg
L1984.43S-0530	120	52	34	34	530	556	80	25	28	M8	6/7	2061		7,7
L1984.43S-0610	120	52	34	34	610	626	80	25	28	M8	6/8	2603		8,9
L1984.43S-0690	120	52	34	34	690	726	80	25	28	M8	7/9	2775		10,1
L1984.43S-0770	120	52	34	34	770	796	80	25	28	M8	7/10	3319		11,2
L1984.43S-0850	120	52	34	34	850	866	80	25	28	M8	9/11	3873		12,4
L1984.43S-0930	120	52	34	34	930	966	80	25	28	M8	9/12	4036		13,6
L1984.43S-1010	120	52	34	34	1010	1036	80	25	28	M8	10/13	4590		14,8
L1984.43S-1090	120	52	34	34	1090	1106	80	25	28	M8	11/14	4908		15,9
L1984.43S-1170	120	52	34	34	1170	1206	80	25	28	M8	12/15	4610		17,1
L1984.43S-1250	120	52	34	34	1250	1276	80	25	28	M8	12/16	4398		18,3
L1984.43S-1330	120	52	34	34	1330	1376	80	25	28	M8	13/17	4027		19,4
L1984.43S-1410	120	52	34	34	1410	1446	80	25	28	M8	13/18	3864		20,6
L1984.43S-1490	120	52	34	34	1490	1516	80	25	28	M8	15/19	3713		21,8
L1984.43S-1570	120	52	34	34	1570	1616	80	25	28	M8	15/20	3445		22,9
L1984.43S-1650	120	52	34	34	1650	1686	80	25	28	M8	16/21	3325		24,1
L1984.43S-1730	120	52	34	34	1730	1756	80	25	28	M8	16/22	3213		25,3
L1984.43S-1810	120	52	34	34	1810	1856	80	25	28	M8	18/23	3011		26,4
L1984.43S-1890	120	52	34	34	1890	1926	80	25	28	M8	18/24	2919		27,6
L1984.43S-1970	120	52	34	34	1970	2026	80	25	28	M8	19/25	2750		28,8



Fully Telescopic Slides, size 28

double direction stroke



L1984.28D

TELESCOPIC SLIDES

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. C_{0rad} is the load rating for a single telescopic

slide. They have very low deflection characteristics.
Temperature range: -30°C to +110°C.
This is the double direction stroke version - the moving member can extend out of both sides of the slide.
Moving rail must be lower rail (unless technical department consulted).

Tips

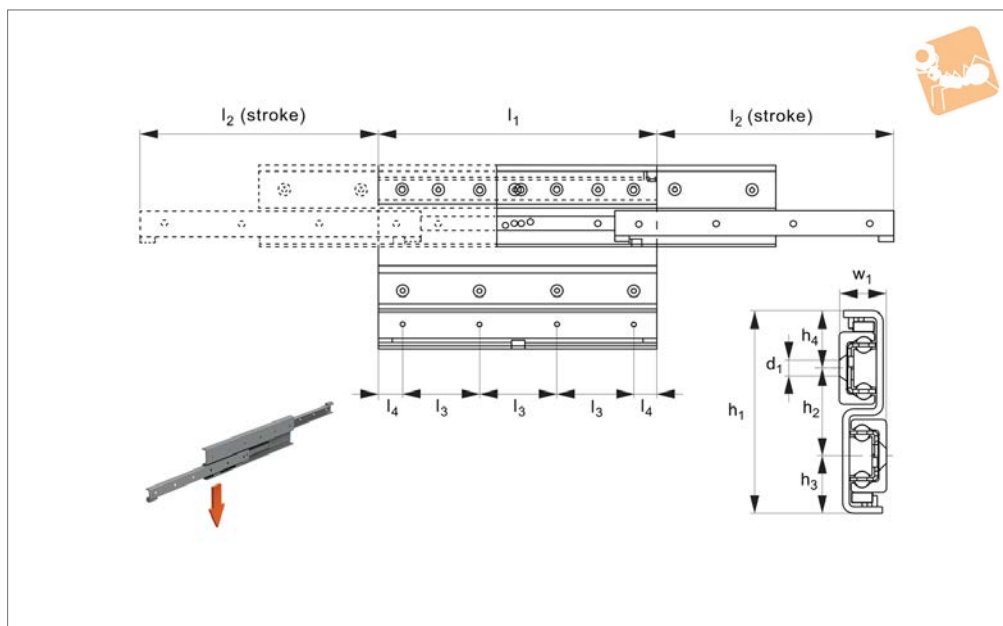
When closing a D version slide, the return of the intermediate member is not auto-

matic. 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.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2	l_3	l_4	w_1	For screws d_1	No. of holes	Load (per rail) C_{0rad}	Weight kg
												N max.	
L1984.28D-0290	84	35	24.5	24.5	290	246	80	25	17	M5	4	895	1.9
L1984.28D-0370	84	35	24.5	24.5	370	326	80	25	17	M5	5	1105	2.4
L1984.28D-0450	84	35	24.5	24.5	450	406	80	25	17	M5	6	1317	2.9
L1984.28D-0530	84	35	24.5	24.5	530	486	80	25	17	M5	7	1626	3.4
L1984.28D-0610	84	35	24.5	24.5	610	566	80	25	17	M5	8	1837	3.9
L1984.28D-0690	84	35	24.5	24.5	690	646	80	25	17	M5	9	2050	4.4
L1984.28D-0770	84	35	24.5	24.5	770	726	80	25	17	M5	10	2262	4.9
L1984.28D-0850	84	35	24.5	24.5	850	806	80	25	17	M5	11	2475	5.4
L1984.28D-0930	84	35	24.5	24.5	930	886	80	25	17	M5	12	2581	5.6
L1984.28D-1010	84	35	24.5	24.5	1010	966	80	25	17	M5	13	2357	6.4
L1984.28D-1090	84	35	24.5	24.5	1090	1046	80	25	17	M5	14	2168	7.0
L1984.28D-1170	84	35	24.5	24.5	1170	1126	80	25	17	M5	15	2008	7.4
L1984.28D-1250	84	35	24.5	24.5	1250	1206	80	25	17	M5	16	1870	8.0
L1984.28D-1330	84	35	24.5	24.5	1330	1286	80	25	17	M5	17	1749	8.5
L1984.28D-1410	84	35	24.5	24.5	1410	1366	80	25	17	M5	18	1644	9.0
L1984.28D-1490	84	35	24.5	24.5	1490	1446	80	25	17	M5	19	1550	9.5



L1984.35D



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. C_{0rad} is the load rating for a single telescopic

slide. They have very low deflection characteristics.

Temperature range: -30°C to $+110^{\circ}\text{C}$.

This is the double direction stroke version - the moving member can extend out of both sides of the slide.

Moving rail must be lower rail (unless technical department consulted).

Tips

When closing a D version slide, the return of the intermediate member is not auto-

matic. 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.

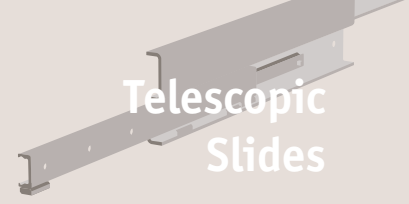
Only to be used for horizontal movements.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2	l_3	l_4	w_1	For screws d_1	No. of holes	Load (per rail) C_{0rad} N max.	Weight kg
L1984.35D-0450	104	43	30.5	30.5	450	350	80	25	22.5	M6	6	1500	4.5
L1984.35D-0530	104	43	30.5	30.5	530	430	80	25	22.5	M6	7	2022	5.4
L1984.35D-0610	104	43	30.5	30.5	610	510	80	25	22.5	M6	8	2290	6.2
L1984.35D-0690	104	43	30.5	30.5	690	590	80	25	22.5	M6	9	2558	9.9
L1984.35D-0770	104	43	30.5	30.5	770	670	80	25	22.5	M6	10	3095	7.7
L1984.35D-0850	104	43	30.5	30.5	850	750	80	25	22.5	M6	11	3361	8.9
L1984.35D-0930	104	43	30.5	30.5	930	830	80	25	22.5	M6	12	3629	9.4
L1984.35D-1010	104	43	30.5	30.5	1010	910	80	25	22.5	M6	13	4171	10.2
L1984.35D-1090	104	43	30.5	30.5	1090	990	80	25	22.5	M6	14	3859	11.0
L1984.35D-1170	104	43	30.5	30.5	1170	1070	80	25	22.5	M6	15	3564	11.8
L1984.35D-1250	104	43	30.5	30.5	1250	1150	80	25	22.5	M6	16	3433	12.6
L1984.35D-1330	104	43	30.5	30.5	1330	1230	80	25	22.5	M6	17	3198	13.4
L1984.35D-1410	104	43	30.5	30.5	1410	1310	80	25	22.5	M6	18	2993	14.2
L1984.35D-1490	104	43	30.5	30.5	1490	1390	80	25	22.5	M6	19	2900	15.0
L1984.35D-1570	104	43	30.5	30.5	1570	1470	80	25	22.5	M6	20	2730	15.9
L1984.35D-1650	104	43	30.5	30.5	1650	1550	80	25	22.5	M6	21	2580	16.6
L1984.35D-1730	104	43	30.5	30.5	1730	1630	80	30.5	22.5	M6	22	2510	17.5

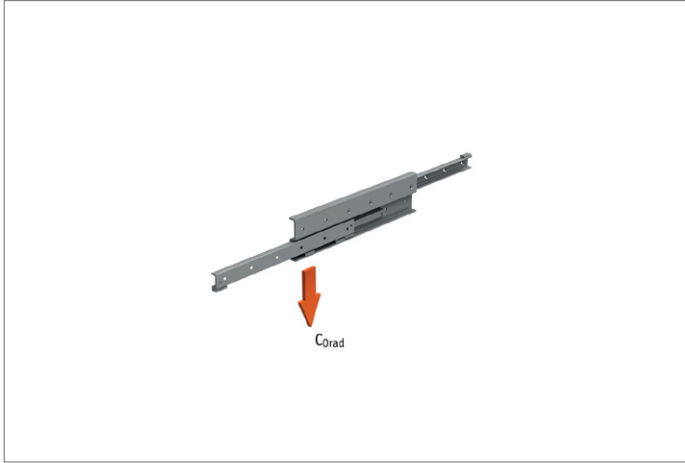


Fully Telescopic Slides, size 35

double direction stroke



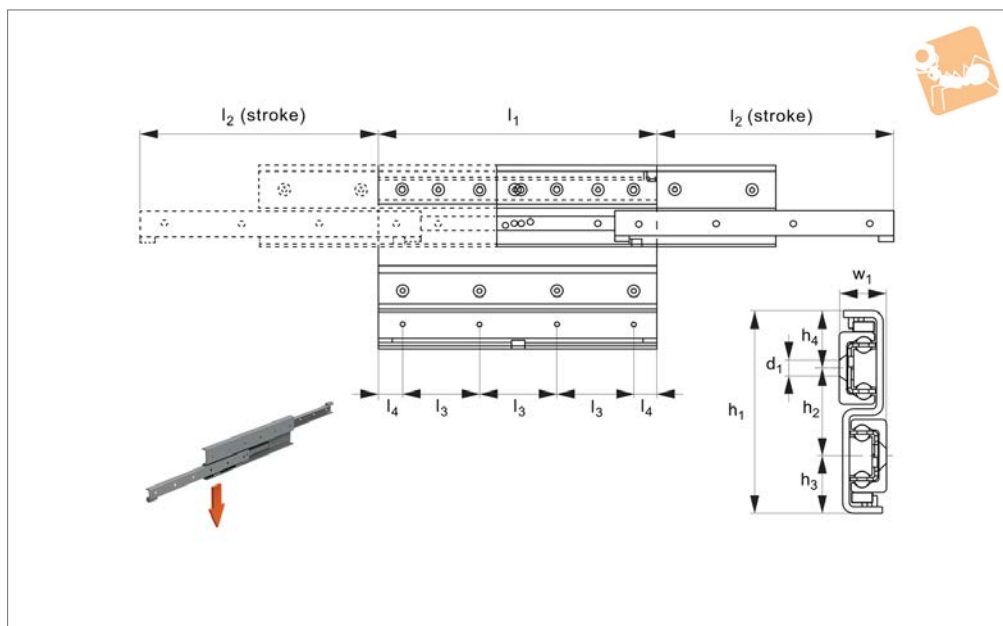
Telescopic Slides



TELESCOPIC SLIDES



L1984.43D



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. C_{0rad} is the load rating for a single telescopic

slide. They have very low deflection characteristics.

Temperature range: -30°C to +110°C.

This is the double direction stroke version - the moving member can extend out of both sides of the slide.

Moving rail must be lower rail (unless technical department consulted).

Tips

When closing a D version slide, the return of the intermediate member is not auto-

matic. 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.

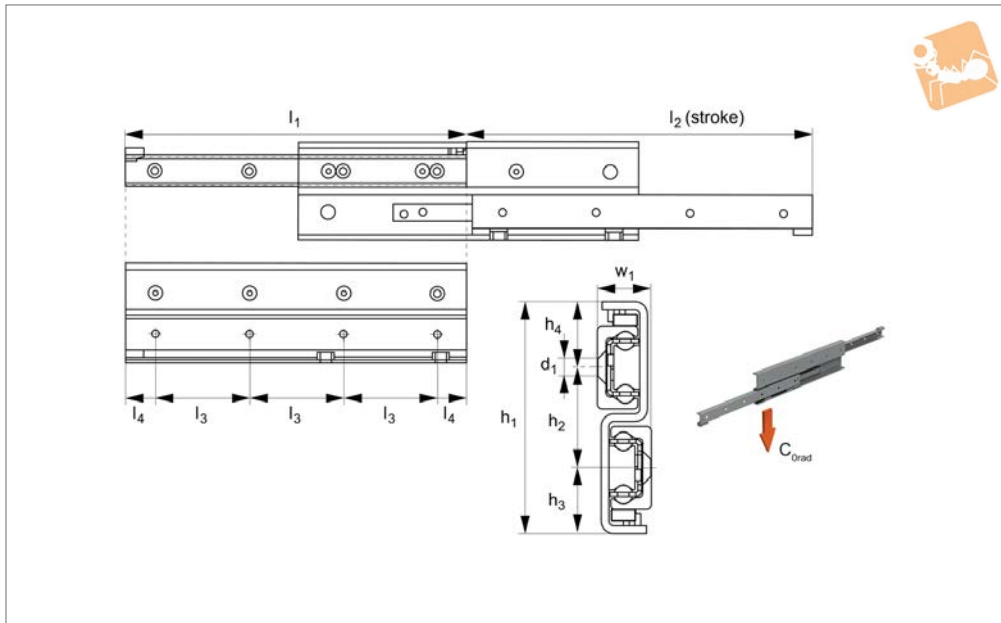
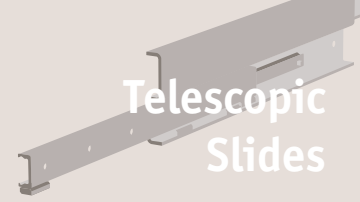
Only to be used for horizontal movements.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2	l_3	l_4	w_1	For screws d_1	No. of holes	Load (per rail) C_{0rad} N max.	Weight kg
L1984.43D-0530	120	52	34	34	530	476	80	25	28	M8	7	3018	7.7
L1984.43D-0610	120	52	34	34	610	556	80	25	28	M8	8	3265	8.9
L1984.43D-0690	120	52	34	34	690	636	80	25	28	M8	9	3781	10.1
L1984.43D-0770	120	52	34	34	770	716	80	25	28	M8	10	4297	11.2
L1984.43D-0850	120	52	34	34	850	796	80	25	28	M8	11	4547	12.4
L1984.43D-0930	120	52	34	34	930	876	80	25	28	M8	12	5063	13.6
L1984.43D-1010	120	52	34	34	1010	956	80	25	28	M8	13	5578	14.8
L1984.43D-1090	120	52	34	34	1090	1036	80	25	28	M8	14	5830	15.9
L1984.43D-1170	120	52	34	34	1170	1116	80	25	28	M8	15	5392	17.1
L1984.43D-1250	120	52	34	34	1250	1196	80	25	28	M8	16	5014	18.3
L1984.43D-1330	120	52	34	34	1330	1276	80	25	28	M8	17	4686	19.4
L1984.43D-1410	120	52	34	34	1410	1356	80	25	28	M8	18	4398	20.6
L1984.43D-1490	120	52	34	34	1490	1436	80	25	28	M8	19	4143	21.8
L1984.43D-1570	120	52	34	34	1570	1516	80	25	28	M8	20	3917	22.9
L1984.43D-1650	120	52	34	34	1650	1596	80	25	28	M8	21	3713	24.1
L1984.43D-1730	120	52	34	34	1730	1676	80	25	28	M8	22	3530	25.3
L1984.43D-1810	120	52	34	34	1810	1756	80	25	28	M8	23	3364	26.4
L1984.43D-1890	120	52	34	34	1890	1836	80	25	28	M8	24	3213	27.6
L1984.43D-1970	120	52	34	34	1970	1916	80	25	28	M8	25	3075	28.8



Fully Telescopic Slides, size 63

single direction stroke



L1984.63S

TELESCOPIC SLIDES

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 teles-

copic slides with high load capacities and have very low deflection characteristics. Temperature range: -30°C to +110°C. This is the single direction stroke version - the moving member can extend out of only one side of the slide. Moving rail must be lower rail (unless technical department consulted). C_{0rad} is the load rating for a single teles-

copic slide.

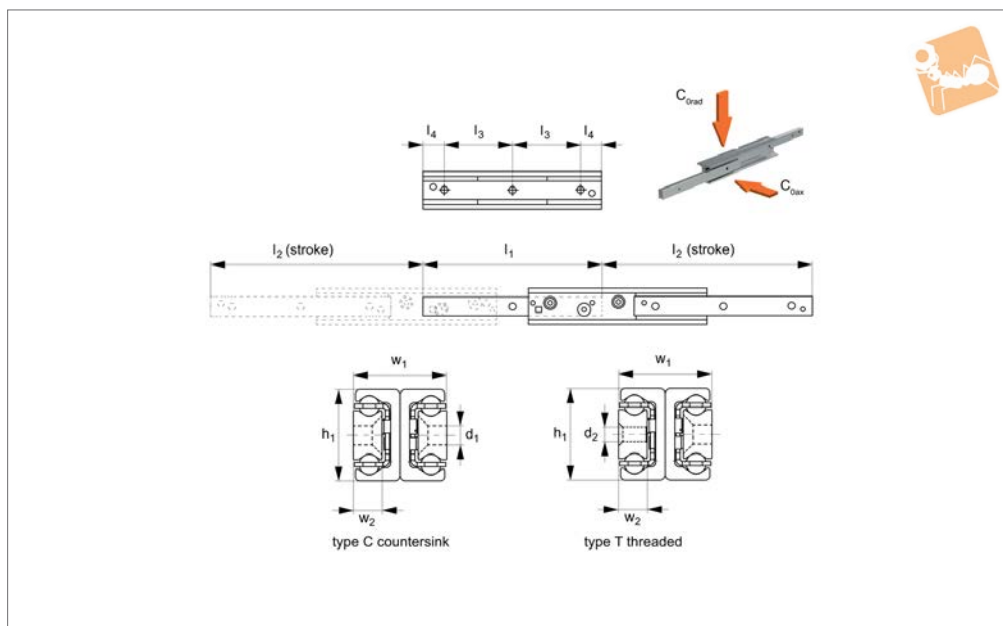
Tips

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 130% of the closed length can be provided on request. Only to be used for horizontal movements.

Order No.	h_1	h_2	h_3	h_4	l_1	l_2	l_3	l_4	w_1	For screws d_1	Accessible holes/total	Load (per rail) N_{max}	C_{0rad}	Weight kg
L1984.63S-0610	208	80	64	64	610	666	80	25	40	M10	6/8	3502	19.9	
L1984.63S-0690	208	80	64	64	690	746	80	25	40	M10	8/9	4252	22.5	
L1984.63S-0770	208	80	64	64	770	826	80	25	40	M10	8/10	5012	25.1	
L1984.63S-0850	208	80	64	64	850	906	80	25	40	M10	9/11	5780	27.7	
L1984.63S-0930	208	80	64	64	930	986	80	25	40	M10	9/12	6552	30.3	
L1984.63S-1010	208	80	64	64	1010	1066	80	25	40	M10	11/13	7329	32.9	
L1984.63S-1090	208	80	64	64	1090	1146	80	25	40	M10	11/14	8109	35.5	
L1984.63S-1170	208	80	64	64	1170	1226	80	25	40	M10	12/15	8892	38.1	
L1984.63S-1250	208	80	64	64	1250	1306	80	25	40	M10	12/16	9677	40.8	
L1984.63S-1330	208	80	64	64	1330	1386	80	25	40	M10	14/17	10464	43.4	
L1984.63S-1410	208	80	64	64	1410	1466	80	25	40	M10	14/18	11252	46.0	
L1984.63S-1490	208	80	64	64	1490	1546	80	25	40	M10	15/19	12041	48.6	
L1984.63S-1570	208	80	64	64	1570	1626	80	25	40	M10	15/20	12832	51.2	
L1984.63S-1650	208	80	64	64	1650	1706	80	25	40	M10	17/21	12364	53.8	
L1984.63S-1730	208	80	64	64	1730	1786	80	25	40	M10	17/22	11827	56.4	
L1984.63S-1810	208	80	64	64	1810	1866	80	25	40	M10	18/23	11334	59.0	
L1984.63S-1890	208	80	64	64	1890	1946	80	25	40	M10	18/24	10881	61.6	
L1984.63S-1970	208	80	64	64	1970	2026	80	25	40	M10	20/25	10463	64.2	



L1986.22



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. C_{0rad}

is the load rating for a single telescopic slide.

Temperature range: -30°C to $+170^{\circ}\text{C}$.

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.

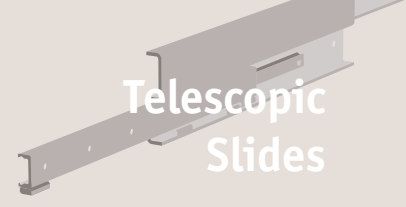
Only to be used for horizontal movements. Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2	l_3	l_4	w_1	w_2	For screws d_1 & d_2	No. of holes	Hole type	Load (per rail) N max.	Load (per rail) C_{0ax}	Load (per rail) N max.	Load (per rail) C_{0rad}	Weight kg
L1986.22C-0130	22	130	152	80	25	22	6,5	M4	2	C'sunk	83		119		0,32
L1986.22C-0210	22	210	222	80	25	22	6,5	M4	3	C'sunk	196		281		0,52
L1986.22C-0290	22	290	308	80	25	22	6,5	M4	4	C'sunk	273		390		0,72
L1986.22C-0370	22	370	392	80	25	22	6,5	M4	5	C'sunk	263		501		0,92
L1986.22C-0450	22	450	462	80	25	22	6,5	M4	6	C'sunk	230		674		1,12
L1986.22C-0530	22	530	548	80	25	22	6,5	M4	7	C'sunk	193		571		1,32
L1986.22C-0610	22	610	632	80	25	22	6,5	M4	8	C'sunk	167		494		1,52
L1986.22C-0690	22	690	702	80	25	22	6,5	M4	9	C'sunk	153		453		1,72
L1986.22C-0770	22	770	788	80	25	22	6,5	M4	10	C'sunk	135		401		1,92
L1986.22T-0130	22	130	152	80	25	22	6,5	M4	2	Thread	83		119		0,32
L1986.22T-0210	22	210	222	80	25	22	6,5	M4	3	Thread	196		281		0,52
L1986.22T-0290	22	290	308	80	25	22	6,5	M4	4	Thread	273		390		0,72
L1986.22T-0370	22	370	392	80	25	22	6,5	M4	5	Thread	263		501		0,92
L1986.22T-0450	22	450	462	80	25	22	6,5	M4	6	Thread	230		674		1,12
L1986.22T-0530	22	530	548	80	25	22	6,5	M4	7	Thread	193		571		1,32
L1986.22T-0610	22	610	632	80	25	22	6,5	M4	8	Thread	167		494		1,52
L1986.22T-0690	22	690	702	80	25	22	6,5	M4	9	Thread	153		453		1,72
L1986.22T-0770	22	770	788	80	25	22	6,5	M4	10	Thread	135		401		1,92

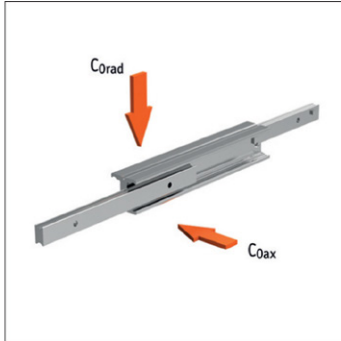


Fully Telescopic Slides

size 22



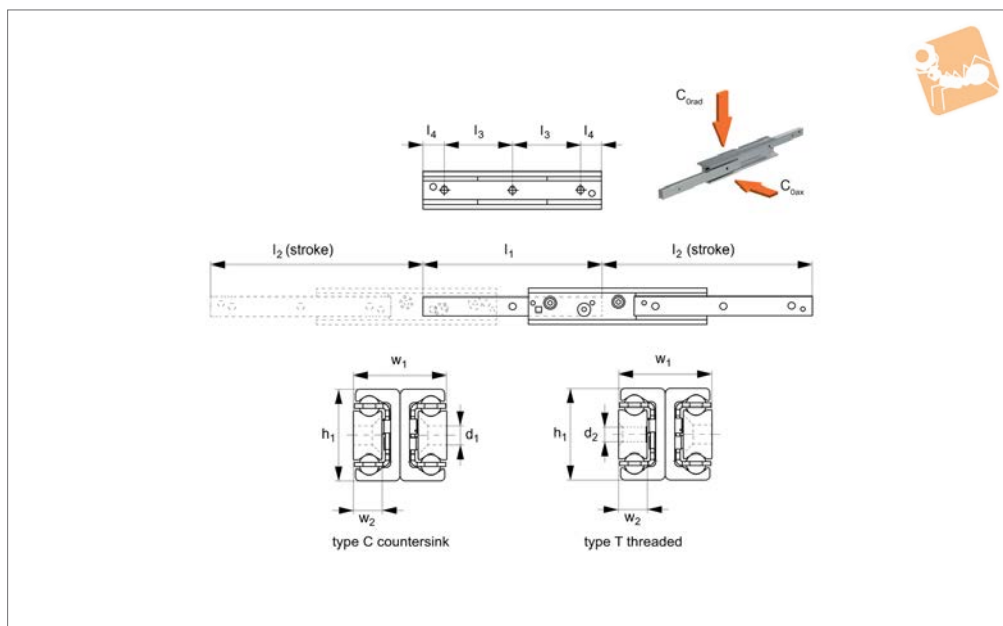
Telescopic Slides



TELESCOPIC SLIDES



L1986.28



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. C_{0rad}

is the load rating for a single telescopic slide.

Temperature range: -30°C to $+170^{\circ}\text{C}$.

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.

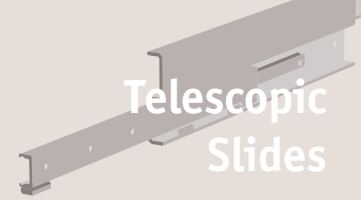
Only to be used for horizontal movements. Special strokes up to 130% of the closed length can be provided on request.

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) N max.	C_{0ax}	Load (per rail) N max.	C_{0rad}	Weight kg
L1986.28C-0130	28	130	148	80	25	26	7,5	5,5	2	C'sunk	164		235		0,52
L1986.28C-0210	28	210	232	80	25	26	7,5	5,5	3	C'sunk	302		432		0,84
L1986.28C-0290	28	290	296	80	25	26	7,5	5,5	4	C'sunk	537		767		1,16
L1986.28C-0370	28	370	380	80	25	26	7,5	5,5	5	C'sunk	471		968		1,48
L1986.28C-0450	28	450	464	80	25	26	7,5	5,5	6	C'sunk	385		1169		1,80
L1986.28C-0530	28	530	548	80	25	26	7,5	5,5	7	C'sunk	325		1107		2,12
L1986.28C-0610	28	610	633	80	25	26	7,5	5,5	8	C'sunk	280		964		2,44
L1986.28C-0690	28	690	717	80	25	26	7,5	5,5	9	C'sunk	247		849		2,76
L1986.28C-0770	28	770	801	80	25	26	7,5	5,5	10	C'sunk	221		758		3,08
L1986.28C-0850	28	850	866	80	25	26	7,5	5,5	11	C'sunk	208		713		3,40
L1986.28C-0930	28	930	950	80	25	26	7,5	5,5	12	C'sunk	189		646		3,72
L1986.28C-1010	28	1010	1034	80	25	26	7,5	5,5	13	C'sunk	174		592		4,04
L1986.28C-1090	28	1090	1118	80	25	26	7,5	5,5	14	C'sunk	160		547		4,36
L1986.28C-1170	28	1170	1202	80	25	26	7,5	5,5	15	C'sunk	149		508		4,68
L1986.28T-0130	28	130	148	80	25	26	7,5	5,5	2	Thread	164		235		0,52
L1986.28T-0210	28	210	232	80	25	26	7,5	5,5	3	Thread	302		432		0,84
L1986.28T-0290	28	290	296	80	25	26	7,5	5,5	4	Thread	537		767		1,16
L1986.28T-0370	28	370	380	80	25	26	7,5	5,5	5	Thread	471		968		1,48
L1986.28T-0450	28	450	464	80	25	26	7,5	5,5	6	Thread	385		1169		1,80
L1986.28T-0530	28	530	548	80	25	26	7,5	5,5	7	Thread	325		1107		2,12
L1986.28T-0610	28	610	633	80	25	26	7,5	5,5	8	Thread	280		964		2,44
L1986.28T-0690	28	690	717	80	25	26	7,5	5,5	9	Thread	247		849		2,76
L1986.28T-0770	28	770	801	80	25	26	7,5	5,5	10	Thread	221		758		3,08
L1986.28T-0850	28	850	866	80	25	26	7,5	5,5	11	Thread	208		713		3,40
L1986.28T-0930	28	930	950	80	25	26	7,5	5,5	12	Thread	189		646		3,72



Fully Telescopic Slides

size 28



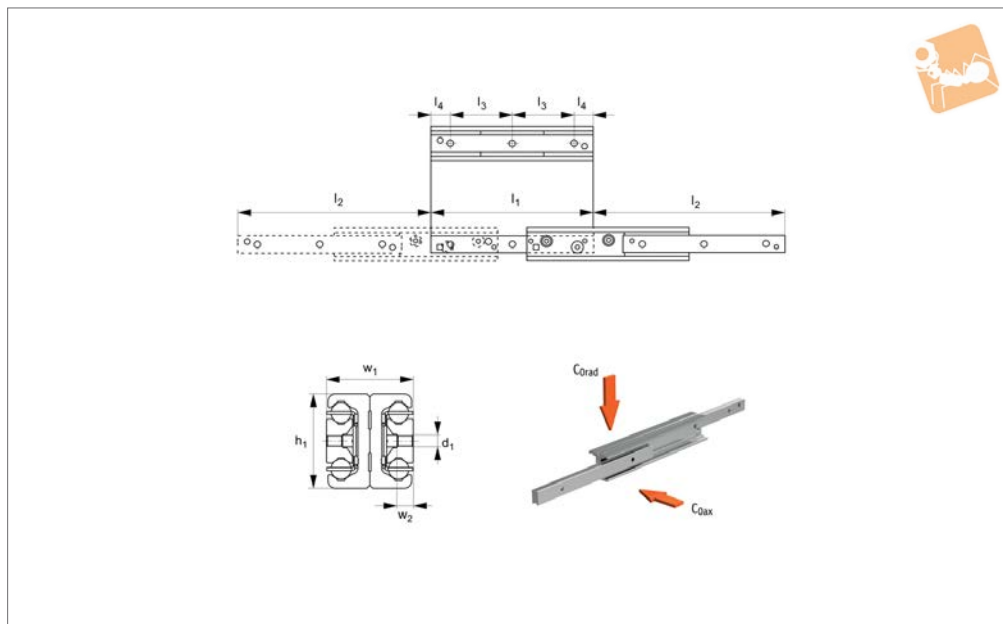
Telescopic Slides

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) N max.	$C_{0\text{ax}}$	Load (per rail) N max.	$C_{0\text{rad}}$	Weight kg
L1986.28T-1010	28	1010	1034	80	25	26	7,5	5,5	13	Thread	174		592		4,04
L1986.28T-1090	28	1090	1118	80	25	26	7,5	5,5	14	Thread	160		547		4,36
L1986.28T-1170	28	1170	1202	80	25	26	7,5	5,5	15	Thread	149		508		4,68

TELESCOPIC SLIDES



L1986.63



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. C_{0rad}

is the load rating for a single telescopic slide.

Temperature range: -30°C to $+170^{\circ}\text{C}$.

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.

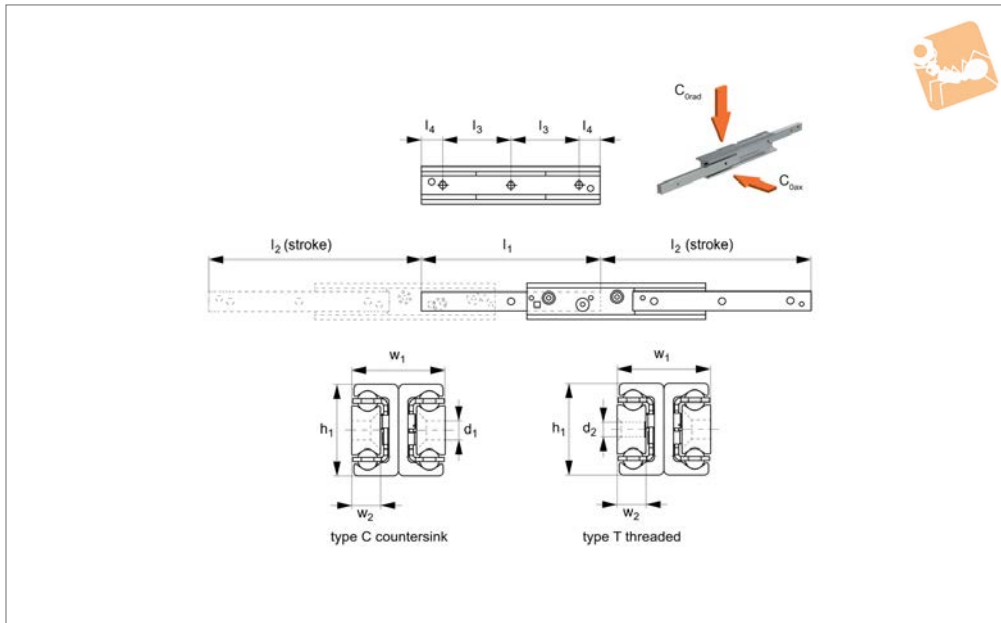
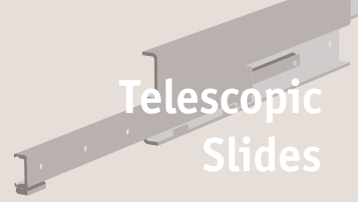
Only to be used for horizontal movements. Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2	l_3	l_4	w_1	w_2	For screws d_1	No. of holes	Hole type	Load (per rail) C_{0ax}	Load (per rail) C_{0rad}	Weight kg
											N max.	N max.	
L1986.63T-0610	63	610	666	80	25	58	10,5	M8	8	Thread	2863	4090	12,56
L1986.63T-0690	63	690	746	80	25	58	10,5	M8	9	Thread	3062	4859	14,21
L1986.63T-0770	63	770	826	80	25	58	10,5	M8	10	Thread	2784	5635	15,86
L1986.63T-0850	63	850	906	80	25	58	10,5	M8	11	Thread	2553	6415	17,51
L1986.63T-0930	63	930	986	80	25	58	10,5	M8	12	Thread	2357	7198	19,15
L1986.63T-1010	63	1010	1066	80	25	58	10,5	M8	13	Thread	2189	6885	20,80
L1986.63T-1090	63	1090	1146	80	25	58	10,5	M8	14	Thread	2043	6427	22,45
L1986.63T-1170	63	1170	1226	80	25	58	10,5	M8	15	Thread	1916	6026	24,10
L1986.63T-1250	63	1250	1306	80	25	58	10,5	M8	16	Thread	1803	5672	25,75
L1986.63T-1330	63	1330	1386	80	25	58	10,5	M8	17	Thread	1703	5357	27,39
L1986.63T-1410	63	1410	1466	80	25	58	10,5	M8	18	Thread	1614	5076	29,04
L1986.63T-1490	63	1490	1546	80	25	58	10,5	M8	19	Thread	1533	4822	30,69
L1986.63T-1570	63	1570	1626	80	25	58	10,5	M8	20	Thread	1460	4593	32,34
L1986.63T-1650	63	1650	1706	80	25	58	10,5	M8	21	Thread	1394	4384	33,39
L1986.63T-1730	63	1730	1786	80	25	58	10,5	M8	22	Thread	1333	4194	35,63
L1986.63T-1810	63	1810	1866	80	25	58	10,5	M8	23	Thread	1278	4019	37,28
L1986.63T-1890	63	1890	1946	80	25	58	10,5	M8	24	Thread	1227	3859	38,93
L1986.63T-1970	63	1970	2026	80	25	58	10,5	M8	25	Thread	1180	3710	40,58

Fully Telescopic Slides

size 35

Telescopic Slides



L1986.35

TELESCOPIC SLIDES

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. 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) N max.	C_{0ax}	Load (per rail) N max.	C_{0rad}	Weight kg
L1986.35C-0210	35	210	254	80	25	33	10	6,5	3	C'sunk	281		402		1,28
L1986.35C-0290	35	290	318	80	25	33	10	6,5	4	C'sunk	560		800		1,76
L1986.35C-0370	35	370	406	80	25	33	10	6,5	5	C'sunk	718		1025		2,25
L1986.35C-0450	35	450	494	80	25	33	10	6,5	6	C'sunk	793		1250		2,74
L1986.35C-0530	35	530	558	80	25	33	10	6,5	7	C'sunk	728		1685		3,23
L1986.35C-0610	35	610	646	80	25	33	10	6,5	8	C'sunk	626		1908		3,72
L1986.35C-0690	35	690	734	80	25	33	10	6,5	9	C'sunk	548		1689		4,20
L1986.35C-0770	35	770	798	80	25	33	10	6,5	10	C'sunk	516		1591		4,69
L1986.35C-0850	35	850	886	80	25	33	10	6,5	11	C'sunk	463		1425		5,18
L1986.35C-0930	35	930	974	80	25	33	10	6,5	12	C'sunk	419		1291		5,67
L1986.35C-1010	35	1010	1038	80	25	33	10	6,5	13	C'sunk	400		1233		6,16
L1986.35C-1090	35	1090	1126	80	25	33	10	6,5	14	C'sunk	367		1131		6,64
L1986.35C-1170	35	1170	1214	80	25	33	10	6,5	15	C'sunk	339		1045		7,13
L1986.35C-1250	35	1250	1278	80	25	33	10	6,5	16	C'sunk	327		1006		7,62
L1986.35C-1330	35	1330	1366	80	25	33	10	6,5	17	C'sunk	308		937		8,11
L1986.35C-1410	35	1410	1454	80	25	33	10	6,5	18	C'sunk	285		877		8,60
L1986.35C-1490	35	1490	1518	80	25	33	10	6,5	19	C'sunk	276		850		9,08
L1986.35T-0210	35	210	254	80	25	33	10	6,5	3	Thread	281		402		1,28
L1986.35T-0290	35	290	318	80	25	33	10	6,5	4	Thread	560		800		1,76
L1986.35T-0370	35	370	406	80	25	33	10	6,5	5	Thread	718		1025		2,25
L1986.35T-0450	35	450	494	80	25	33	10	6,5	6	Thread	793		1250		2,74
L1986.35T-0530	35	530	558	80	25	33	10	6,5	7	Thread	728		1685		3,23
L1986.35T-0610	35	610	646	80	25	33	10	6,5	8	Thread	626		1908		3,72
L1986.35T-0690	35	690	734	80	25	33	10	6,5	9	Thread	548		1689		4,20
L1986.35T-0770	35	770	798	80	25	33	10	6,5	10	Thread	516		1591		4,69

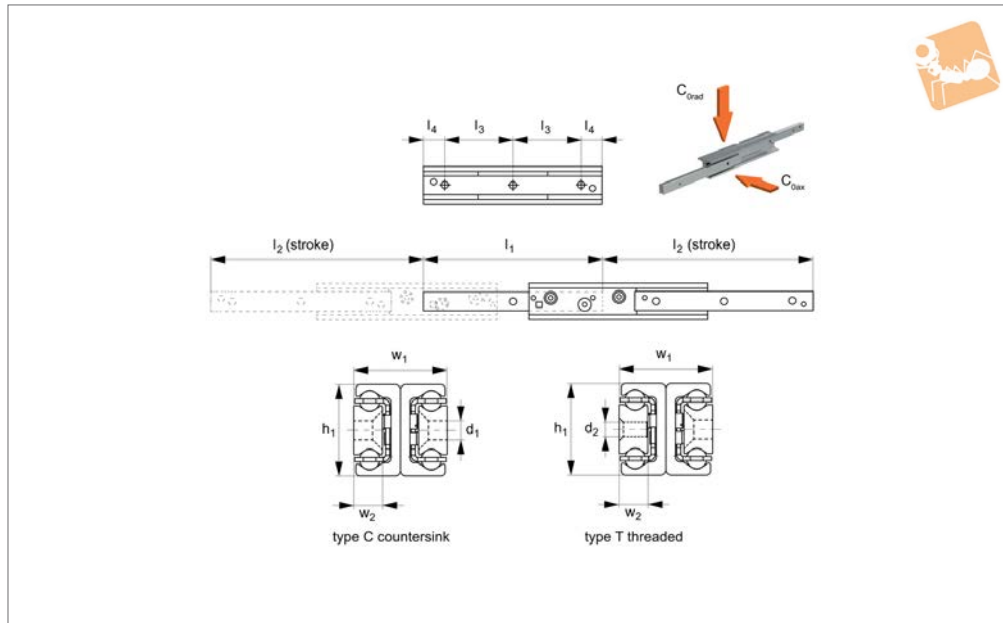
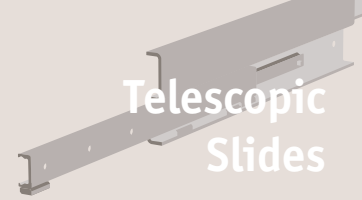


Order No.	h ₁	l ₁	l ₂ stroke	l ₃	l ₄	w ₁	w ₂	For screws d ₁ & d ₂	No. of holes	Hole type	Load (per rail)		Weight kg
											C _{0 ax} N max.	C _{0 rad} N max.	
L1986.35T-0850	35	850	886	80	25	33	10	6,5	11	Thread	463	1425	5,18
L1986.35T-0930	35	930	974	80	25	33	10	6,5	12	Thread	419	1291	5,67
L1986.35T-1010	35	1010	1038	80	25	33	10	6,5	13	Thread	400	1233	6,16
L1986.35T-1090	35	1090	1126	80	25	33	10	6,5	14	Thread	367	1131	6,64
L1986.35T-1170	35	1170	1214	80	25	33	10	6,5	15	Thread	339	1045	7,13
L1986.35T-1250	35	1250	1278	80	25	33	10	6,5	16	Thread	327	1006	7,62
L1986.35T-1330	35	1330	1366	80	25	33	10	6,5	17	Thread	308	937	8,11
L1986.35T-1410	35	1410	1454	80	25	33	10	6,5	18	Thread	285	877	8,60
L1986.35T-1490	35	1490	1518	80	25	33	10	6,5	19	Thread	276	850	9,08



Fully Telescopic Slides

size 43



L1986.43

TELESCOPIC SLIDES

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. 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	Load (per rail) C_0	Weight kg
											C_{ax} max.	C_{rad} max.	
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

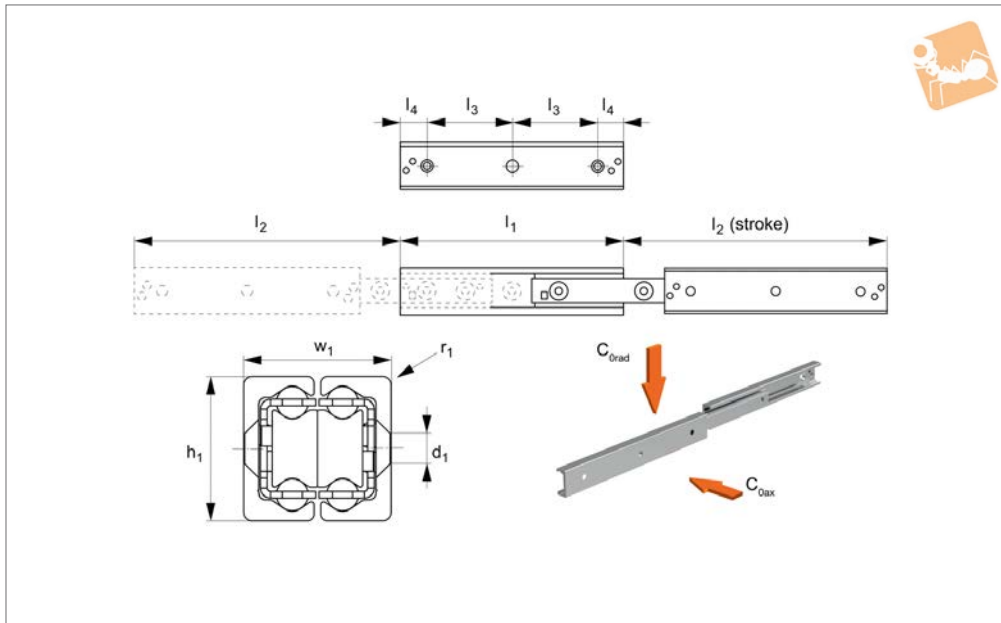
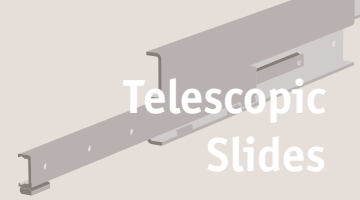


Order No.	h ₁	l ₁	l ₂ stroke	l ₃	l ₄	w ₁	w ₂	For screws d ₁ & d ₂	No. of holes	Hole type	Load (per rail) C ₀	Load (per rail) C ₀	Weight kg
											ax N max.	rad N max.	
L1986.43T-0370	43	370	416	80	25	44	13,5	8,5	5	Thread	910	1300	3,88
L1986.43T-0450	43	450	486	80	25	44	13,5	8,5	6	Thread	1279	1828	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



Fully Telescopic Slides

size 22



L1988.22

TELESCOPIC SLIDES

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. C_{0rad} is the load rating for a single telescopic slide.

Temperature range: -30°C to $+170^{\circ}\text{C}$.

The strong intermediate member allows the rail to be mounted with the load acting radially or axially with nearly the same load capacity.

Tips

A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.

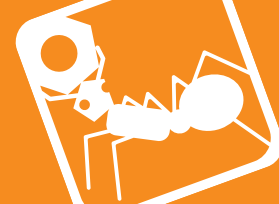
For double direction strokes, when the moving element has started the stroke in

the opposite direction it will catch the intermediate member and force it to return.

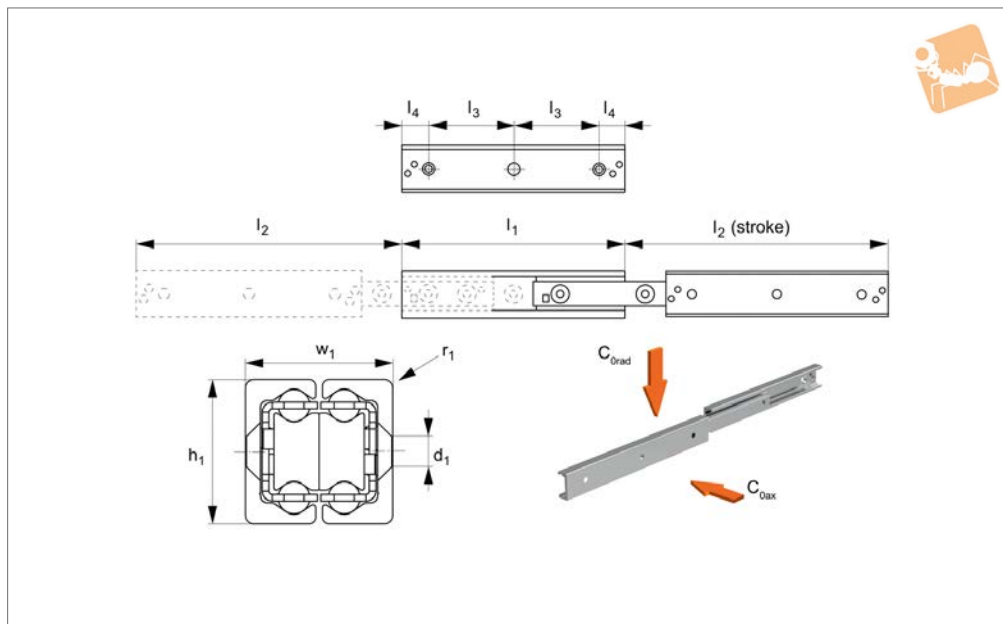
The slides have end stops, but these are not designed to stop a moving, loaded slide. External end stops should be used for this.

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	l_3	l_4	w_1	r_1	For screws d_1	No. of holes	Load (per rail) C_{0ax}	Load (per rail) C_{0rad}	Weight kg
										N max.	N max.	
L1988.22-0130	22	130	152	80	25	22	3	M4	2	83	119	0.32
L1988.22-0210	22	210	222	80	25	22	3	M4	3	196	281	0.52
L1988.22-0290	22	290	308	80	25	22	3	M4	4	236	236	0.72
L1988.22-0370	22	370	392	80	25	22	3	M4	5	186	186	0.92
L1988.22-0450	22	450	462	80	25	22	3	M4	6	162	162	1.12
L1988.22-0530	22	530	548	80	25	22	3	M4	7	136	136	1.32
L1988.22-0610	22	610	632	80	25	22	3	M4	8	117	117	1.52
L1988.22-0690	22	690	702	80	25	22	3	M4	9	108	108	1.72
L1988.22-0770	22	770	788	80	25	22	3	M4	10	95	95	1.92



L1988.28



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. C_{0rad} is the load rating for a single telescopic slide.

Temperature range: -30°C to $+170^{\circ}\text{C}$.

The strong intermediate member allows the rail to be mounted with the load acting radially or axially with nearly the same load capacity.

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.

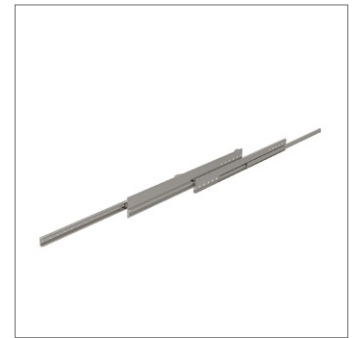
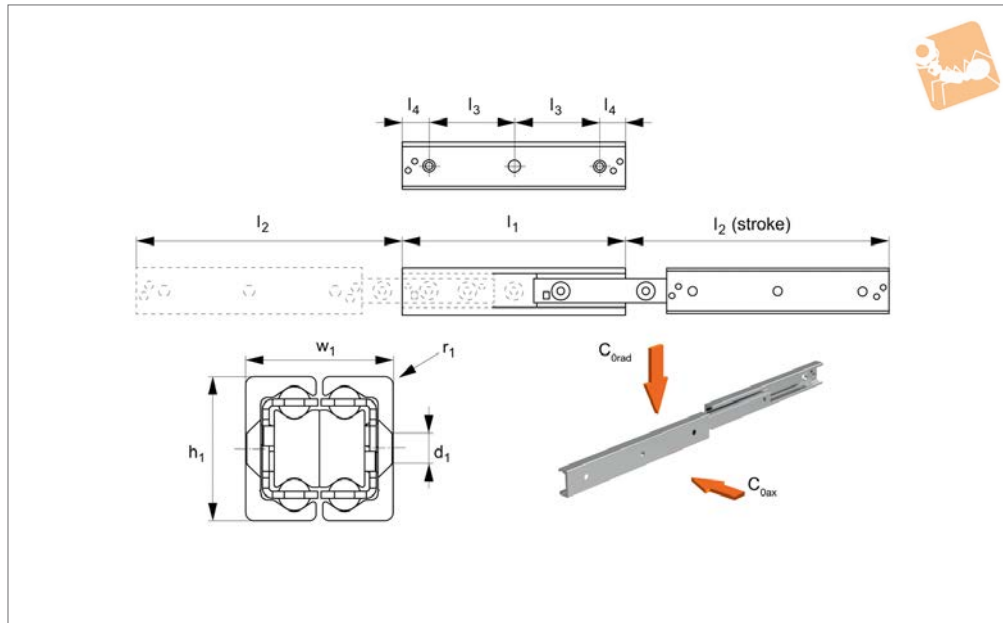
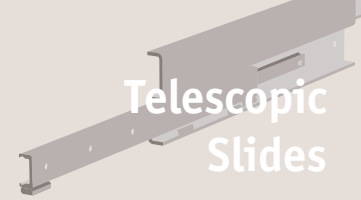
Only to be used for horizontal movements. Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	r_1	For screws d_1	No. of holes	Load (per rail) C_{0ax}	Load (per rail) C_{0rad}	Weight kg
										N max.	N max.	
L1988.28-0130	28	130	148	80	25	26	1	M5	2	172	244	0.47
L1988.28-0210	28	210	232	80	25	26	1	M5	3	313	444	0.92
L1988.28-0290	28	290	296	80	25	26	1	M5	4	545	632	1.28
L1988.28-0370	28	370	380	80	25	26	1	M5	5	490	496	1.63
L1988.28-0450	28	450	464	80	25	26	1	M5	6	405	405	1.98
L1988.28-0530	28	530	548	80	25	26	1	M5	7	342	342	2.33
L1988.28-0610	28	610	633	80	25	26	1	M5	8	298	298	2.68
L1988.28-0690	28	690	717	80	25	26	1	M5	9	263	263	3.04
L1988.28-0770	28	770	801	80	25	26	1	M5	10	234	234	3.39
L1988.28-0850	28	850	866	80	25	26	1	M5	11	220	230	3.74
L1988.28-0930	28	930	950	80	25	26	1	M5	12	200	200	4.09
L1988.28-1010	28	1010	1034	80	25	26	1	M5	13	183	183	4.44
L1988.28-1090	28	1090	1118	80	25	26	1	M5	14	170	170	4.80
L1988.28-1170	28	1170	1202	80	25	26	1	M5	15	157	157	5.15



Fully Telescopic Slides

size 35



L1988.35

TELESCOPIC SLIDES

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. C_{0rad} is the load rating for a single telescopic slide.

Temperature range: -30°C to $+170^{\circ}\text{C}$.
The strong intermediate member allows the rail to be mounted with the load acting radially or axially with nearly the same load capacity.

Tips

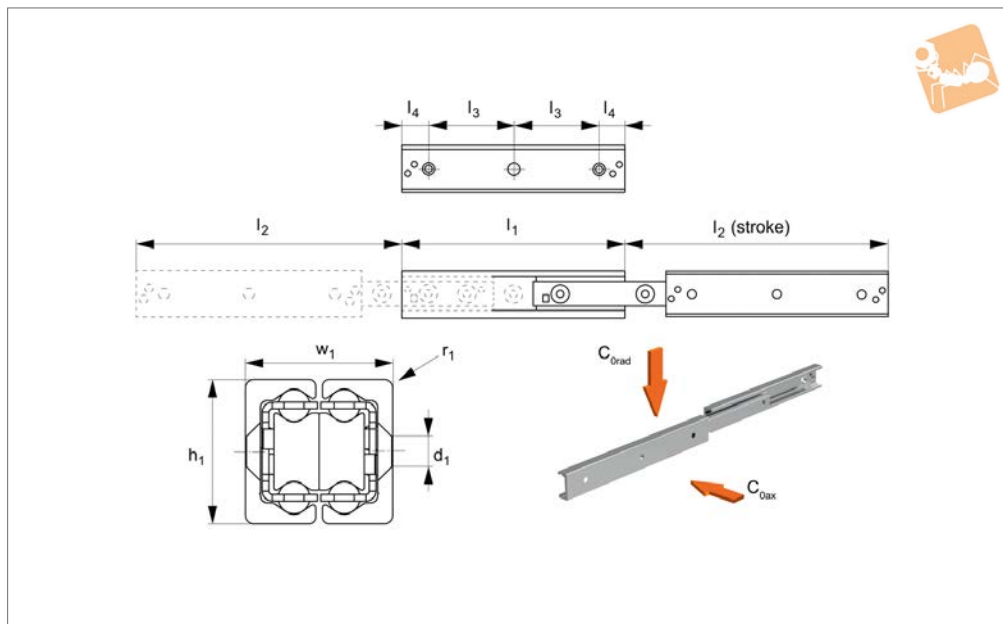
A double direction stroke can be obtained by removing the end stops screws at the end of each side of the intermediate member.
For double direction strokes, when the moving element has started the stroke in

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	r_1	For screws d_1	No. of holes	Load (per rail) C_{0ax}	Load (per rail) C_{0rad}	Weight kg
										N max.	N max.	
L1988.35-0210	34	210	254	80	25	35	2	M6	3	286	409	1.15
L1988.35-0290	34	290	318	80	25	35	2	M6	4	569	684	1.60
L1988.35-0370	34	370	406	80	25	35	2	M6	5	534	534	2.05
L1988.35-0450	34	450	494	80	25	35	2	M6	6	439	439	2.55
L1988.35-0530	34	530	558	80	25	35	2	M6	7	403	403	3.00
L1988.35-0610	34	610	646	80	25	35	2	M6	8	346	346	3.55
L1988.35-0690	34	690	734	80	25	35	2	M6	9	304	304	3.90
L1988.35-0770	34	770	798	80	25	35	2	M6	10	286	286	4.45
L1988.35-0850	34	850	886	80	25	35	2	M6	11	256	256	4.90
L1988.35-0930	34	930	974	80	25	35	2	M6	12	232	232	5.30
L1988.35-1010	34	1010	1038	80	25	35	2	M6	13	221	221	5.80
L1988.35-1090	34	1090	1126	80	25	35	2	M6	14	205	205	6.25
L1988.35-1170	34	1170	1214	80	25	35	2	M6	15	187	187	6.70
L1988.35-1250	34	1250	1278	80	25	35	2	M6	16	181	181	7.15
L1988.35-1330	34	1330	1366	80	25	35	2	M6	17	169	169	7.60
L1988.35-1410	34	1410	1454	80	25	35	2	M6	18	160	160	8.10
L1988.35-1490	34	1490	1518	80	25	35	2	M6	19	153	153	8.65



L1988.43



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. C_{0rad} is the load rating for a single telescopic slide.

Temperature range: -30°C to $+170^{\circ}\text{C}$.

The strong intermediate member allows the rail to be mounted with the load acting radially or axially with nearly the same load capacity.

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.

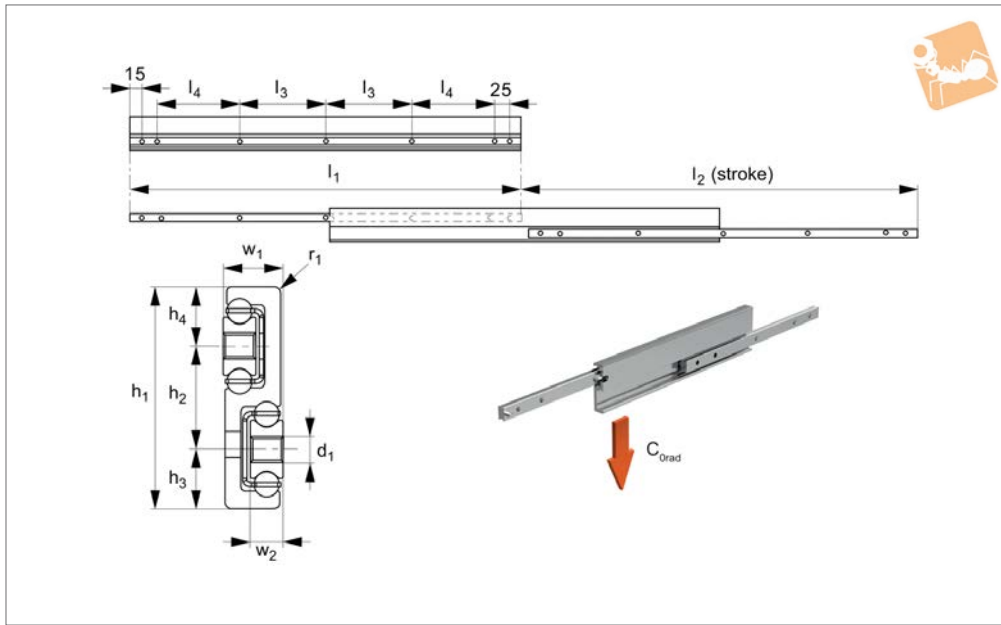
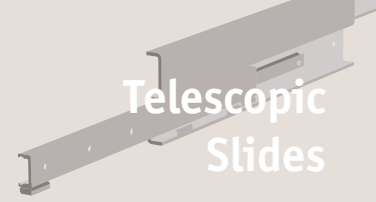
Only to be used for horizontal movements. Special strokes up to 130% of the closed length can be provided on request.

Order No.	h_1	l_1	l_2 stroke	l_3	l_4	w_1	r_1	For screws d_1	No. of holes	Load (per rail) C_{0ax}	Load (per rail) C_{0rad}	Weight kg
										N max.	N max.	
L1988.43-0210	43	210	246	80	25	44	2.5	M8	3	449	631	2.33
L1988.43-0290	43	290	316	80	25	44	2.5	M8	4	819	1158	3.212
L1988.43-0370	43	370	316	80	25	44	2.5	M8	5	954	1349	4.11
L1988.43-0450	43	450	486	80	25	44	2.5	M8	6	1298	1370	5.00
L1988.43-0530	43	530	556	80	25	44	2.5	M8	7	1229	1229	5.88
L1988.43-0610	43	610	626	80	25	44	2.5	M8	8	1115	1115	6.77
L1988.43-0690	43	690	726	80	25	44	2.5	M8	9	939	939	7.66
L1988.43-0770	43	770	796	80	25	44	2.5	M8	10	870	870	8.55
L1988.43-0850	43	850	866	80	25	44	2.5	M8	11	812	812	9.44
L1988.43-0930	43	930	966	80	25	44	2.5	M8	12	714	714	10.32
L1988.43-1010	43	1010	1036	80	25	44	2.5	M8	13	674	674	11.21
L1988.43-1090	43	1090	1106	80	25	44	2.5	M8	14	629	629	12.10
L1988.43-1170	43	1170	1206	80	25	44	2.5	M8	16	576	576	12.99
L1988.43-1250	43	1250	1276	80	25	44	2.5	M8	17	546	546	13.88
L1988.43-1330	43	1330	1376	80	25	44	2.5	M8	18	503	503	14.76
L1988.43-1410	43	1410	1446	80	25	44	2.5	M8	19	473	473	15.65
L1988.43-1490	43	1490	1516	80	25	44	2.5	M8	20	464	464	16.54
L1988.43-1570	43	1570	1586	80	25	44	2.5	M8	21	443	443	17.43
L1988.43-1650	43	1650	1686	80	25	44	2.5	M8	23	415	415	18.32
L1988.43-1730	43	1730	1756	80	25	44	2.5	M8	24	397	397	19.20
L1988.43-1810	43	1810	1856	80	25	44	2.5	M8	25	376	376	20.09
L1988.43-1890	43	1890	1926	80	25	44	2.5	M8	26	364	364	21.00
L1988.43-1970	43	1970	2026	80	25	44	2.5	M8	27	344	344	21.87



Fully Telescopic Slides LTF

Telescopic Slides



L1992

TELESCOPIC SLIDES

Material

Cold drawn bearing steel, raceways are not hardened. Balls - hardened steel. Zinc coating to ISO2081 (excluding raceways). Corrosion resistant coatings on request.

Technical Notes

This is a lower cost slide with non-hardened raceways but still providing high

load capacity.

Temperature range: -30°C to +170°C.

More suited for less frequent opening applications.

Only to be used for horizontal movements.

C_{Orad} is the load rating for a single telescopic slide.

Tips

The fixed top member must be mounted to

the fixed structure and the moving member to the mobile structure - using all of the threaded holes.

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

Order No.	h_1	h_2	h_3	h_4	l_1	l_2 stroke	l_3	l_4	w_1	w_2	r_1	For screws d_1	No. of holes	Load (per rail) C_0 rad N max.	Weight kg
L1992.44-0200	43	20	11,5	11,5	200	210		60	12	6,5	1,5	M5	5	114	0,54
L1992.44-0225	43	20	11,5	11,5	225	235		72,5	12	6,5	1,5	M5	5	130	0,59
L1992.44-0250	43	20	11,5	11,5	250	260		85	12	6,5	1,5	M5	5	144	0,67
L1992.44-0275	43	20	11,5	11,5	275	285		97,5	12	6,5	1,5	M5	5	162	0,74
L1992.44-0300	43	20	11,5	11,5	300	310		110	12	6,5	1,5	M5	5	180	0,81
L1992.44-0325	43	20	11,5	11,5	325	335		122,5	12	6,5	1,5	M5	5	196	0,87
L1992.44-0350	43	20	11,5	11,5	350	360		135	12	6,5	1,5	M5	5	210	0,94
L1992.44-0375	43	20	11,5	11,5	375	385		147,5	12	6,5	1,5	M5	5	226	1,01
L1992.44-0400	43	20	11,5	11,5	400	410		160	12	6,5	1,5	M5	5	246	1,08
L1992.44-0425	43	20	11,5	11,5	425	435		172,5	12	6,5	1,5	M5	5	262	1,14
L1992.44-0450	43	20	11,5	11,5	450	460		185	12	6,5	1,5	M5	7	276	1,21
L1992.44-0500	43	20	11,5	11,5	500	510	110	100	12	6,5	1,5	M5	7	312	1,35
L1992.44-0550	43	20	11,5	11,5	550	560	135	100	12	6,5	1,5	M5	7	342	1,48
L1992.44-0600	43	20	11,5	11,5	600	610	160	100	12	6,5	1,5	M5	7	384	1,62
L1992.44-0650	43	20	11,5	11,5	650	660	185	100	12	6,5	1,5	M5	7	408	1,75
L1992.44-0700	43	20	11,5	11,5	700	710	160	150	12	6,5	1,5	M5	7	444	1,89
L1992.44-0750	43	20	11,5	11,5	750	760	185	150	12	6,5	1,5	M5	7	474	2,02
L1992.44-0800	43	20	11,5	11,5	800	810	210	150	12	6,5	1,5	M5	7	510	2,16
L1992.44-0850	43	20	11,5	11,5	850	860	235	150	12	6,5	1,5	M5	7	540	2,29
L1992.44-0900	43	20	11,5	11,5	900	910	260	150	12	6,5	1,5	M5	7	576	2,43
L1992.44-0950	43	20	11,5	11,5	950	960	285	150	12	6,5	1,5	M5	7	612	2,56
L1992.44-1000	43	20	11,5	11,5	1000	1010	310	150	12	6,5	1,5	M5	7	648	2,70



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

Partial extension telescopic slides

L1994 - these are extremely compact rails with a simple design and very high load ratings. They have high radial and axial load capacity as well as the ability to take considerable moment loads.

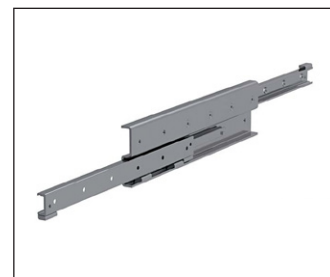
Standard extension	50%
Special extension range	up to 65% (on request)
Single & double direction?	Yes (remove end stop)
Number of rail sizes	5
Maximum extension (at 50%)	1010 mm
Maximum load (per rail)	4500 Kg



Full extension telescopic slides

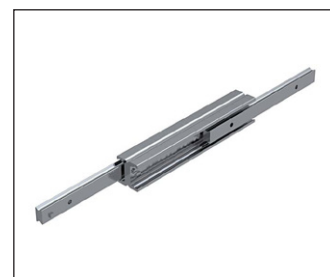
L1984 - these are very thin rails with high levels of rigidity and load capacity. Very low deflection even when fully loaded and in an open position.

Standard extension	100%
Special extension range	up to 130% (on request)
Single & double direction?	Yes (specify on ordering)
Number of rail sizes	4
Maximum extension (at 100%)	2020 mm
Maximum load (per rail)	1200 Kg



L1986 - a very low height rail gives the slide very rigid capabilities. The double T cross section allows a compact size with low radial loading deflection and axial load capability too.

Standard extension	100%
Special extension range	up to 130% (on request)
Single & double direction?	Yes (remove end stop)
Number of rail sizes	5
Maximum extension (at 100%)	2020 mm
Maximum load (per rail)	700 Kg



L1988 - the compact, low profile, square shaped configuration gives the slides similar load capacities for radial and axial loads.

Standard extension	100%
Special extension range	up to 130% (on request)
Single & double direction?	Yes (remove end stop)
Number of rail sizes	4
Maximum extension (at 100%)	2020 mm
Maximum load (per rail)	1250 Kg



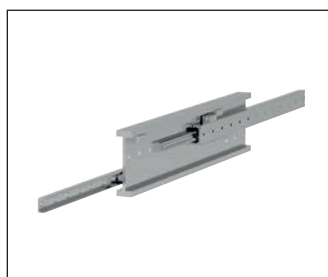


L1992 - our lightest duty telescopic slides. Still from cold-drawn steel but with unhardened raceways making these parts robust but less expensive than our other telescopic rails.



Standard extension	100%
Special extension range	No
Single & double direction?	No
Number of rail sizes	1
Maximum extension (at 100%)	1010 mm
Maximum load (per rail)	60 Kg

L1996 - these are ultra heavy-duty telescopic slides, for very heavy loads. An extremely rigid double T profile acts as an intermediate element providing a high load capacity and minimum deflection.



Standard extension	100%
Special extension range	up to 130% (on request)
Single & double direction?	On request
Number of rail sizes	1
Maximum extension (at 100%)	2250 mm
Maximum load (per rail)	1900 Kg

L1995 - these are compact design, heavy duty full stroke telescopic rails. They have a relatively light weight, and have induction hardened raceways for long-life.



Standard extension	100%
Special extension range	up to 130% (on request)
Single & double direction?	Yes (remove end stop)
Number of rail sizes	4
Maximum extension (at 100%)	2020 mm
Maximum load (per rail)	550 Kg

L1985 - these are full extension slides to be used where dirt or other contaminants might be present. The ball bearings are replaced with large roller bearings (with wipers to clear the rail). Based on our compact rail system.



Standard extension	100%
Special extension range	No
Single & double direction?	No
Number of rail sizes	1
Maximum extension (at 100%)	1980 mm
Maximum load (per rail)	275 Kg

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

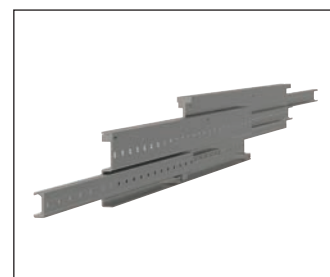
L1997 - these are extended stroke (150%), heavy duty telescopic rails, with high load capacity and stiffness.

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





How to select a telescopic rail

Firstly, these telescopic rails are for heavy duty applications, they are not made from pressed steel but from cold-drawn steel, with hardened raceways.

As a result they can be used in demanding applications and for repetitive applications or for applications where a high degree of product reliability is required as well as smooth and consistent operation. They have smooth movement, minimal play and a low coefficient of friction. There are no better telescopic rails available!

Stroke required

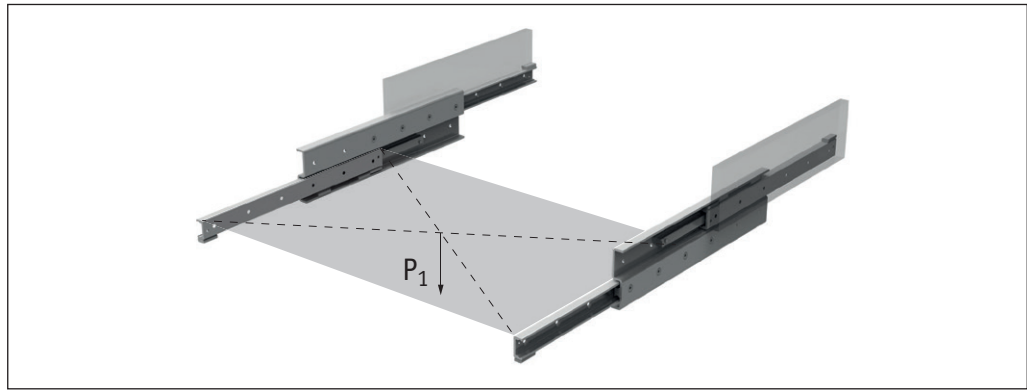
In general the partial extension (strokes of 50% of overall rail length) telescopic rails are less expensive than the full extension rails and over-extension rails.

Where possible the use of a double direction rail (i.e. can stroke forward and backwards) can be very cost-effective, allowing twice the stroke for the same rail length, but this may not suit many applications.

Load capacity

The next consideration is based on the load to be carried. All loads given are for a single rail and assume the load is centred in the mid-point of the moveable rail, in its extended position.

Important: In cases where the rail has an upper and lower rail, the receiving rail should be the lower one.



Typically, a pair of rails is used and the load acts in the centre of both rails. In this case the load capacity of the pair of rails is calculated as follows:

$$P_1 = 2 \cdot C_{Orad}$$

Some rails are more suited to axial loads and moment loads than others, dependent on their cross sectional form.

Rail shape

The different rail profiles and sizes allow rails to be chosen to suit various applications e.g.

L1984 - thin section.

L1992 - thin section (but lighter duty).

L1986 - low height.

L1988 - low height.

L1995 - very heavy duty.

L1996 - very heavy duty.

Anti-corrosion treatments

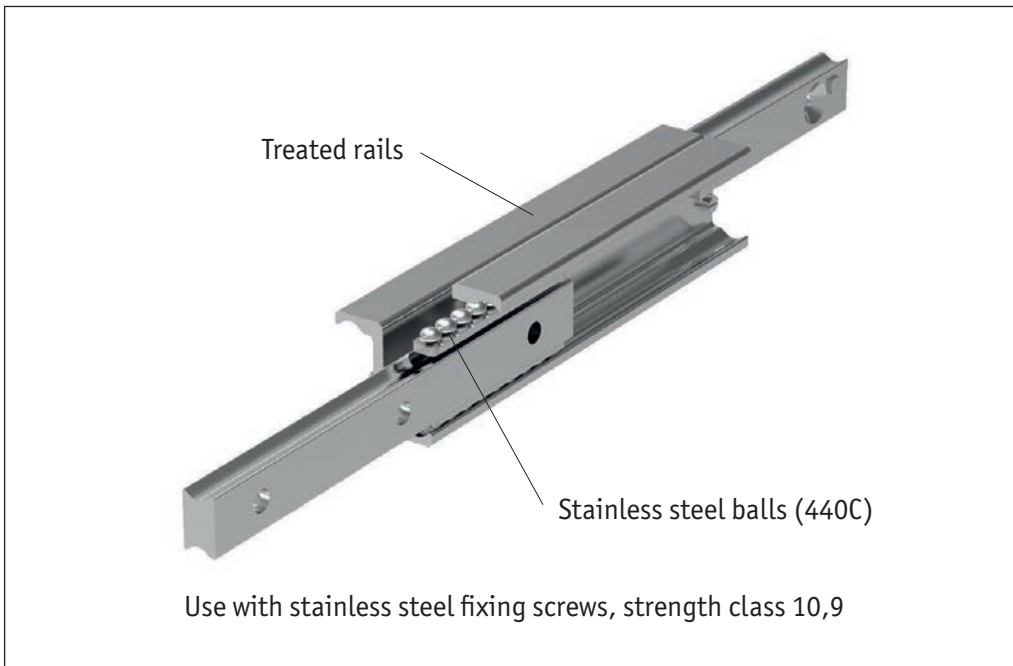
The telescopic slides have a standard electrolytic zinc plate coating (to ISO 2081).

We offer a number of alternatives to increase the anti-corrosion protection including nickel plating.

However, our preferred and most effective solution to inhibit corrosion is to apply a special corrosion resistant (Lanthane) plating to the rails and sliders and to combine this with stainless steel ball bearings.

This coating is applied after the zinc plating process and is a special trivalent chromium passivation that is approximately 15 microns thick (and is free of Chromium VI).

This applies a nano-particle coating and has extremely good results of 200 hours in salt spray tests before any signs of white rust.

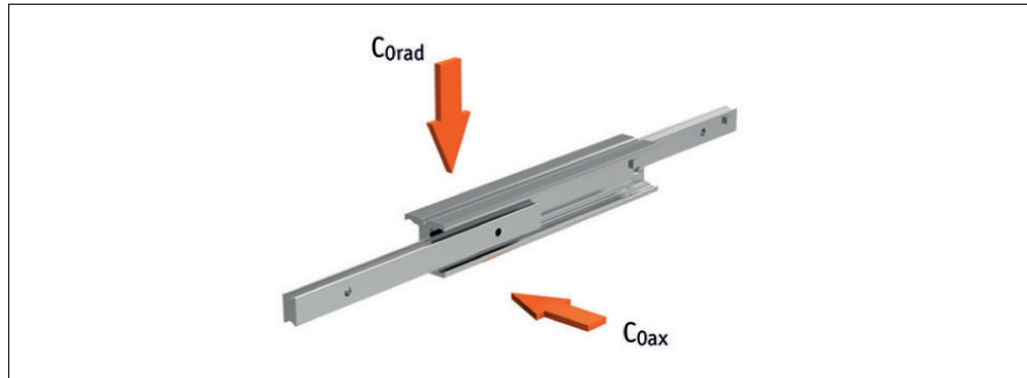


The coating on the telescopic slides is a soft coating and will (over time) wear off the raceways (which are subject to loads from the ball bearings) – this can be seen sometimes by a thin line on the raceways.

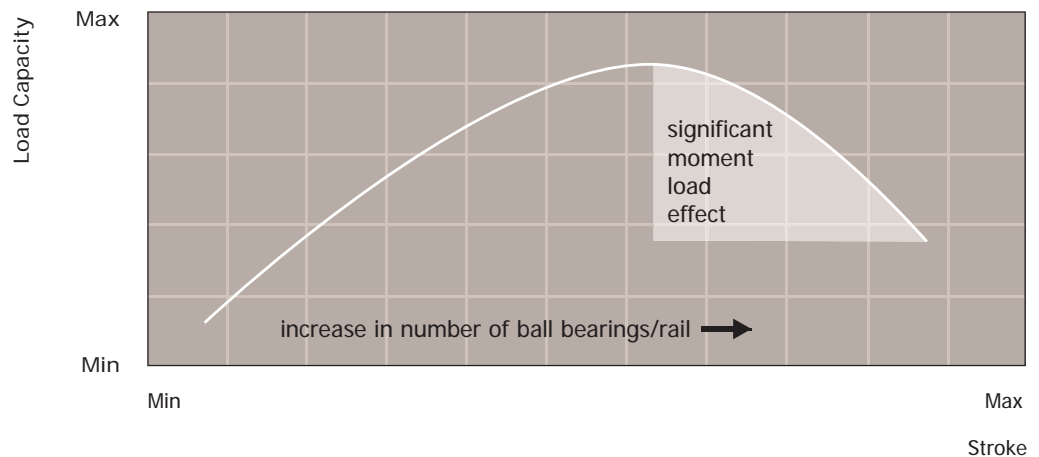
However lubricating the raceways with grease (as recommended) ensures, as far as possible, the good corrosion properties of the overall coating.



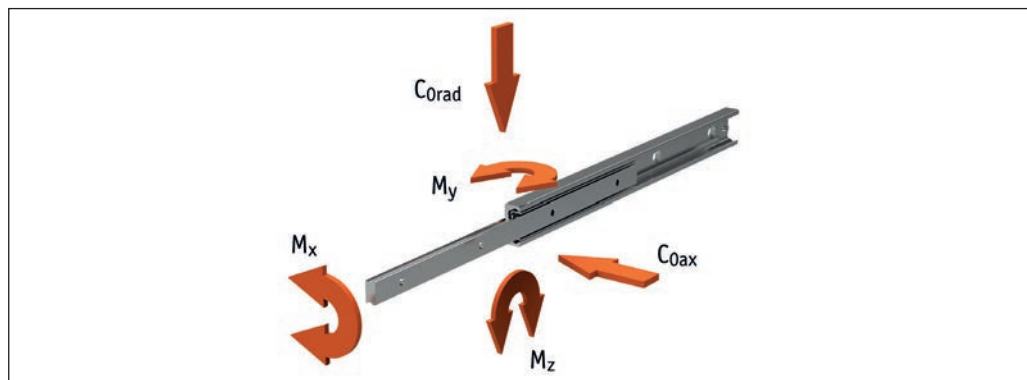
Wherever possible the telescopic rails should be used so that the main load applied is a radial load on the telescopic rail. Only certain types of our telescopic rails can accept axial loads. Typically the radial load is around an extra 60% to 100% of the axial load. All our load figures are shown per rail and assume that the load is centred about the mid-extended position of the rails.



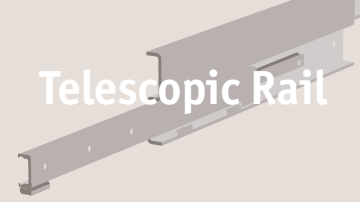
For telescopic rails with an upper and lower element, the moving element should be the lower element. A typical telescopic rail size will have then following load capacity profile:-



Partially telescopic rails will have a considerably higher load capacity than fully telescopic rails, so if you have space to fit a partially telescopic rail (say 50% extension) then choosing this type can allow a smaller profile size rail to be chosen, reducing the cost. Partially telescopic rails can also accept some moment loads.



For the load ratings to apply the structure to which they are mounted must be rigid and not distorted, and all the fixing holes for the mounting screws should be used.



Increasing the stroke

The stroke of many of the rails can be increased slightly from the standard.

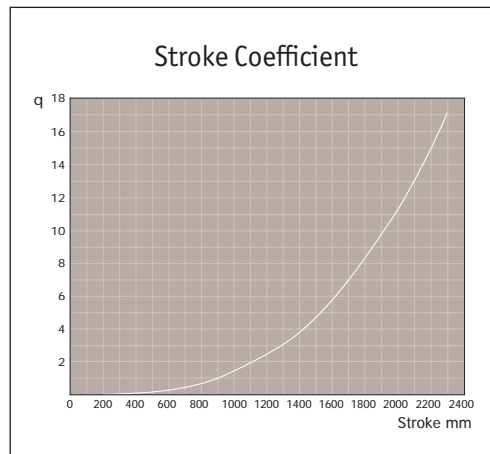
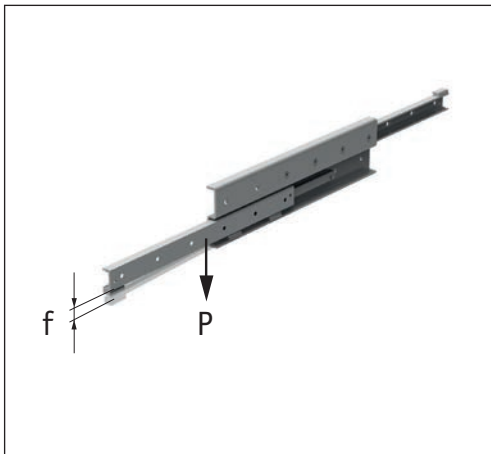
This is achieved by reducing the length of the ball cage in the rail. This will have the effect of reducing the load capacity of the rail - in this case for a correct load rating please consult our Technical Department.

Typically a 100% stroke rail can be increased to a maximum stroke of 130% (of the closed length of the rail) and a partial extension stroke rail (50% extension) can be increased to a maximum of 65%.

Please see the table in the technical pages which shows how special stroke rails can be specified.

Deflection

The maximum deflection allowed should also be considered.



If the load P acts vertically on the rail, then the expected elastic deflection of the individual telescopic rail in the extended state can be found by:

$$f = \frac{q}{t} \cdot P$$

f = expected elastic deflection (in mm)

q = stroke coefficient (see graph)

t = factor depending on the model of the telescopic rail (see below)

P = actual load acting on the centre of a rail, in N

L1984.28	$t = 180$	L1986.63	$t = 540$
L1984.35	$t = 470$	L1988.22	$t = 3$
L1984.43	$t = 800$	L1988.28	$t = 8$
L1984.43	$t = 4000$	L1988.35	$t = 13$
L1986.22	$t = 8$	L1988.43	$t = 56$
L1986.28	$t = 17$	L1992.LTF44	$t = 25$
L1986.35	$t = 54$	L1985.43	$t = 3500$
L1986.43	$t = 120$	L1985.43	$t = 800$

Note: This formula applies to a single rail. When using a rail pair, the load of the single rail is $P = P_{total}/2$. This estimated value assumes an absolutely rigid adjacent construction. If this rigidity is not present, the actual deflection will deviate from the calculation.

Important: With the partial extensions series, the deflection is almost completely determined by the rigidity (i.e. by the moment of inertia) of the adjacent construction.



Example of a special stroke

Product series	Maximum stroke as % of closed length
L1984	130%
L1986	130%
L1988	130%
L1994	65%

E.g. a standard stroke for L1984.435-0070 is 796mm.

This can be increased to 130% of 770 i.e. 1001 mm, but is limited by the factor in the table below (in this example the stroke modification is 30mm):

<p>Standard stroke: 796mm</p> <p>Stroke modification: 30mm (ball spacing)</p> <p>e.g. extra ... 826, 856, 886, 916... 976</p>
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Therefore the part number for the maximum stroke would be:

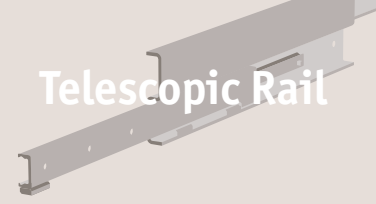
Special strokes

Special strokes are defined as deviations from standard stroke l_2 . Increasing the stroke involves reducing the length of the ball cage and number of balls. This in turn reduces the rail load capacity. To confirm the reduced rail load capacity figures, please contact our Technical Department.

These values are dependent on the spacing of the ball cage (i.e. by reducing the number of balls the stroke can be increased).

Type	Size	Stroke modification mm
L1984	28	19
L1986	35	24
L1988	43	30
L1994	28	9,5
	35	12
	43	15

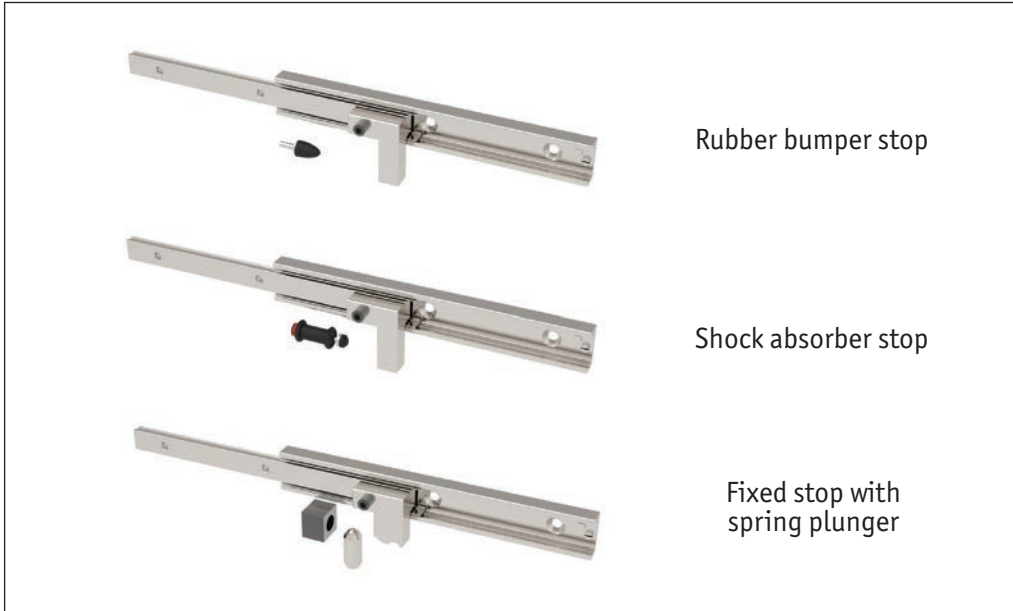
No stroke modification is possible for series L1984 and L1985. Each stroke modification influences the load capabilities stated in the catalogue. It can happen that after a stroke modification, important fastening holes are no longer accessible. For more information, please consult our Technical Department. Stroke modification of series L1996 on request.



External stops

On many of our rails, light duty end stops are built into the rail. These are only to stop movement when not loaded - they are not designed to stop a moving, loaded slide.

External end stops must be designed into systems to prevent any damage to the telescopic rails (some examples are shown below).



Rubber bumper stop

Shock absorber stop

Fixed stop with spring plunger

Locking systems

For the L1984 series telescopic rails, there is an optional locking system unit (for locking in the closed position). This would be used for example in transport sector applications (military, rail etc.) where there is often a need to have the slide locked off during vehicle movement.

For locking in the up position (if required) customers design their own locking system (in built in their designed structure).

Rigidity and alignment of structure

To get the best life, minimum rail deflection, and smoothness of movement, it is very important that the slides are installed (using all the accessible mounting holes) onto a rigid, parallel, plane structure.

The fixed and moving part of the slides assume the rigidity of the mounting structure.

Lubrication

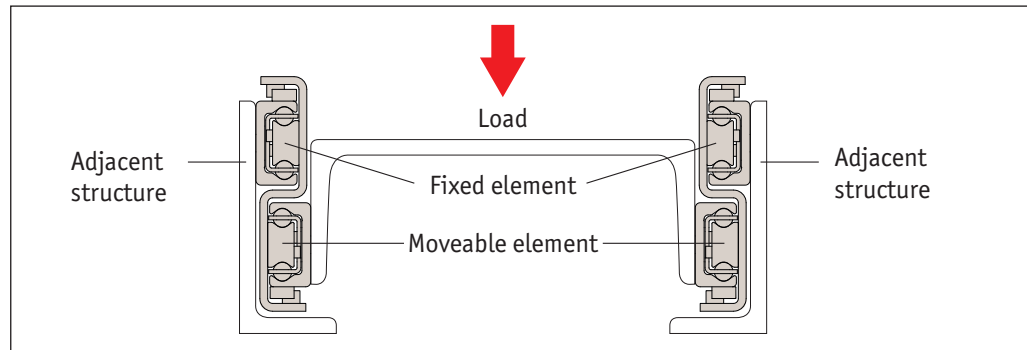
Recommended lubrication intervals are heavily dependent upon the ambient conditions, speed and temperature. Under normal conditions, lubrication is recommended after 100 Km of operational performance or after an operating period of six months. In critical application cases the interval should be shorter.

Please clean the raceways carefully before lubrication. Raceways and spaces of the ball cage are lubricated with a lithium lubricant of average consistency (roller bearing lubricant).

Different lubricants for special applications are available upon request, e.g. lubricant with FDA approval is available for use in the food industry.



Installation instructions



General

- Internal stops are used to stop the unloaded slider and the ball cage. Please use external stops as end stops for a loaded system.
- To achieve optimum running properties, high service life and rigidity, it is necessary to fix the telescopic rails with all accessible holes onto a rigid and level surface. When using two telescopic rails, please observe the parallelism of the installation surfaces. The fixed and moveable rails fit to the rigid assembly construction.
- Our telescopic rails are suitable for continuous use in automatic systems. For this, the stroke should remain constant in all moving cycles and the operating speed must be checked. The movement of the telescopic rails is enabled by internal ballcages, which may experience an offset from the original position with differing strokes. This phase offset can have a negative effect on the running properties or limit the stroke. If differing strokes occur in an application, the drive force must be sufficient to appropriately synchronise the ball cage offset. Otherwise, an additional maximum stroke must be planned regularly to ensure the correct position of the ballcage.

L1994

- The L1994 series accepts radial and axial loads as well as moment loads in all principle directions.
- Horizontal preferred (vertical application is possible, but prior to vertical installation, we recommend you consult our Technical Department).
- The installation of two partial extensions on a single profile provides a very high load capacity full extension, please consult our Technical Department.

L1986 and L1988

- The L1986 and L1988 series accept radial and axial loads.
- Horizontal preferred (vertical application is possible, but prior to vertical installation, we recommend you consult our Technical Department).

L1984, L1992, L1996, L1985 and L1989

- The L1984, L1992, L1996, L1995 and L1989 series accept radial loads. This should act in the vertical cross-sectional axis on the moveable rails.
- Horizontal preferred (vertical application is possible, but prior to vertical installation, we recommend you consult our Technical Department).
- When installing make sure that the load is placed on the moveable element (the lower rail). The opposite assembly negatively affects smooth movement and load capacity of the telescopic stroke.
- Installation must be done on a rigid, adjacent construction using all accessible fixing holes.
- Pay attention to the parallel alignment during assembly with a paired application.