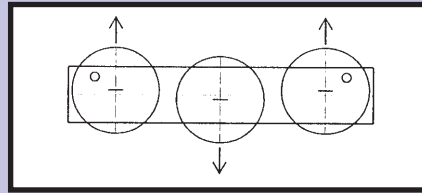
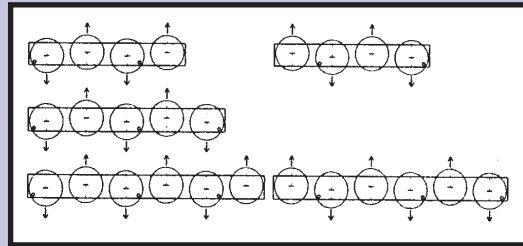


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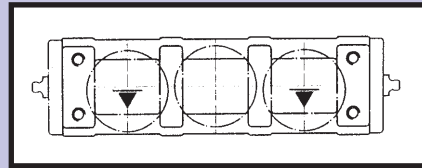
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The standard versions with more than three rollers, available for the CSW series only, are arranged as follows

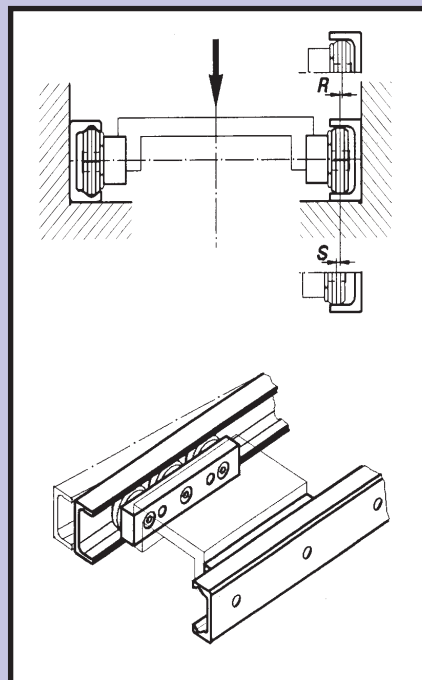


In the NCS and NCX sliders a triangular symbol engraved on the plastic caps covering the pivots identifies the fixed rollers and their contact side on the rail.



Using U-series rails

The U-rails have been developed to be used with T-rails to avoid problems of alignment when assembling two parallel rails. This problem generally occurs because of insufficient precision of parallelism of the surfaces supporting the rails causing overloads of the sliders.

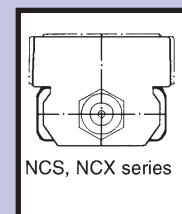


When a T.. and a U.. rail are used in the combination, the T-rail fulfils the function of locating and guiding the moving elements whilst the non-locating U-rail has only to support its share of radial loads. The load capacities of sliders assembled in U-rails (these will be purely radial loads) are identical to those concerning the use of sliders with T-rails

The sliders assembled on U-rails differ from those used in T-rails only in the shape of the wiper (see below). When sliders are ordered separately the suffix -U must be added to the order code if they are intended for use in U-rails.

The rails of the U-series have flat raceways, which give lateral freedom to the slider. The maximum

achievable axial displacement of the slider in a U-rail is given by R and S in the table.

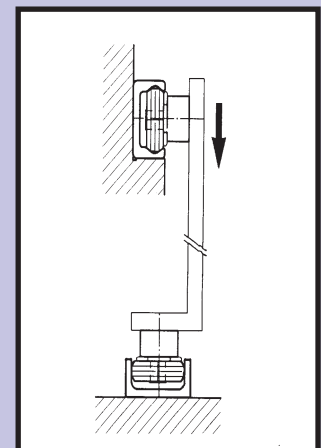


Type	(mm)	
	R	S
U..18	0.4	1.1
U..28	0.7	1.3
U..43	1.5	2.5
U..63	0.5	3.5

The T-U rail combination can be used in different configurations. In the example below a TL-rail supports the vertical component of the load P in the plane of the rollers

A UL-rail is placed below the moving element in order to avoid possible oscillations and the consequent overturning movements. it permits some displacement also in the vertical plane.

This solution is particularly advantageous when the supporting surface of the rail is not precise.



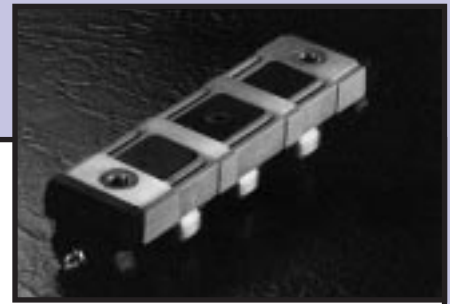
- ✓ Easy to Install
- ✓ Compact Design
- ✓ High Load Capacity
- ✓ Silent Operation
- ✓ Lightweight
- ✓ Fully Sealed Sliders
- ✓ Unlimited Travel
- ✓ Parallel Control

Induction hardened raceways are positioned inside the track/channel to optimise their protection and provide long durable service.

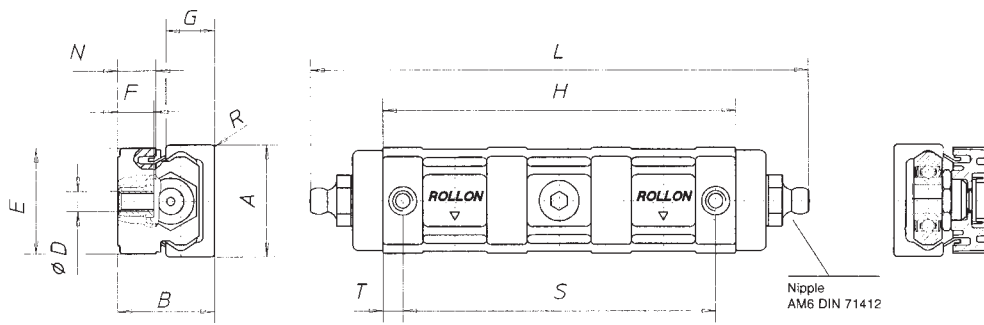
The 'T' series track has grooved raceways to accept profiled ball bearings that provide the sliding action. The 'U' series has flat parallel raceways which allow the slider to have free lateral movement, making the installation of two parallel tracks easy to install as the slide in the 'U' track will mimic exactly the movement of the slider in the master track (see diagram).

Position of the rollers

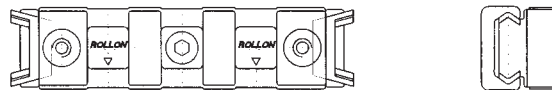
The sliders NCS, NCX and CSW are equipped with rollers which are alternately in contact with the two raceways. In the versions with the three rollers the central one is eccentric and is adjustable, whereas the other rollers are fixed.



Patent Pending

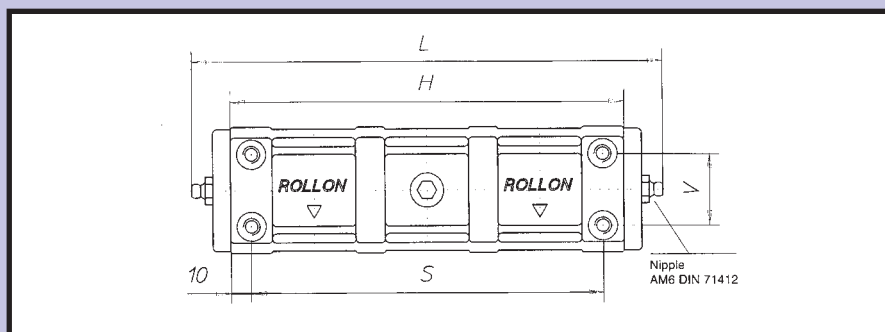


NCS18 type, showed beside, has a different shaped wiper



Type	Dimensions (mm)												Weight (g)	
	A	B		L	H	T	S	ØD	R	E	G	F		N
NCS18	18	16.5		74	62	5	52	M5	1.5	17.6	8.3	6.4	6.5	30
NCS28	28	24*	23.9**	124	88	5	78	M5	1	26.5	12.3	9.3	9.4	115
NCS43	43	37*	36.9**	170	134	10	114	M8	2.5	41	21	13.7	14	385
NCX63	63	50.5*	50.4**	225	188	10	168	M8	2	60	28	14	20.2	1070

NCX63 Slider

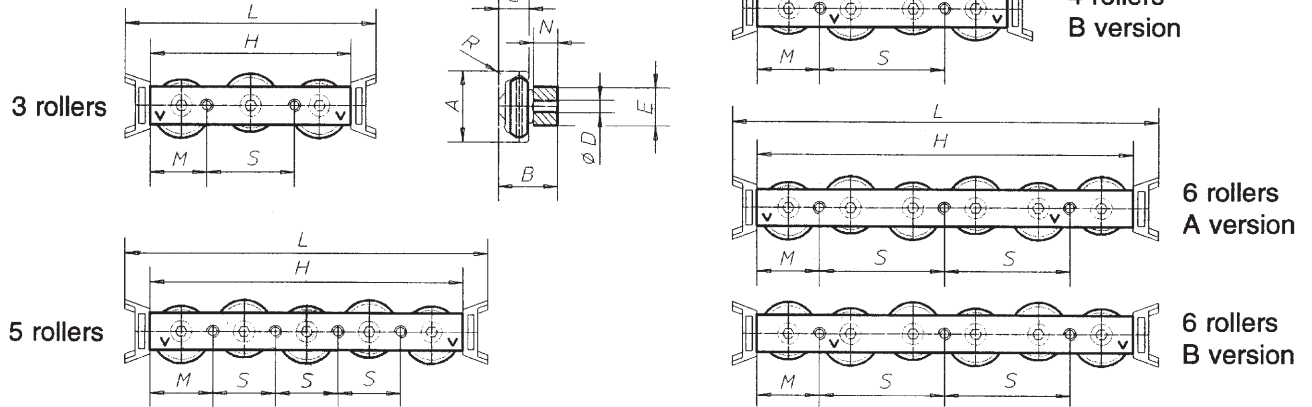
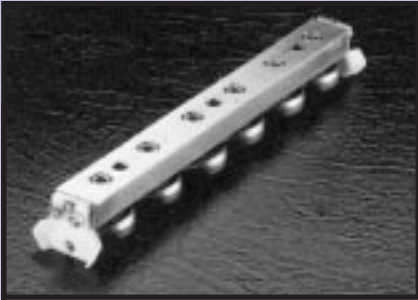


V
34

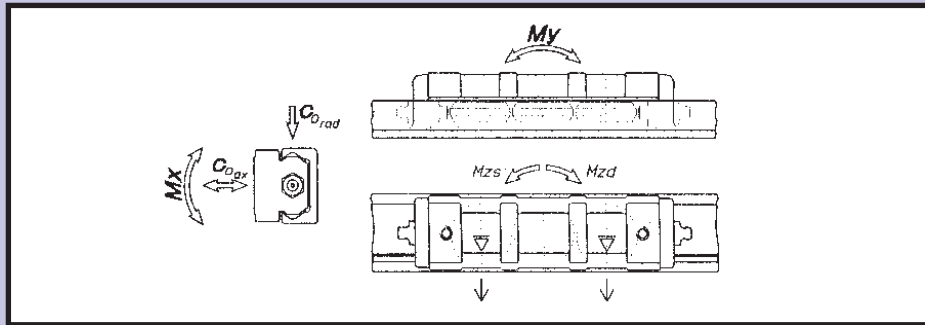
Slide Track- CSW (Open) Slides

Bearing Selection

- 2Z Fitted with metallic shields and greased for life
- 2RS Fitted with synthetic rubber contact seals and greased for life
- 2ZR Fitted with special seals and greased for life



Type	No of rollers	A Rail Type TLUL	B Rail Type TLUL	R	G	ØD	E	N	L	H	M	S	No of Fixing Holes	Weight (grams)	Adjusting Spanner
CSW18-60-2Z CSW18-60-2RS	3	18	15	1.5	8.3	M5	9.5	5.7	76	60	20	20	2	40	CK18
CSW18-80-2Z CSW18-80-2RS	4	18	15	1.5	8.3	M5	9.5	5.7	96	80	20	40	2	50	CK18
CSW18-100-2Z CSW18-100-2RS	5	18	15	1.5	8.3	M5	9.5	5.7	116	100	20	20	4	60	CK18
CSW18-120-2Z CSW18-120-2RS	6	18	15	1.5	8.3	M5	9.5	5.7	136	120	20	40	3	70	CK18
CSW28-80-2Z CSW28-80-2RS	3	28	23.9	1	12.3	M5	14.9	9.7	100	80	22.5	35	2	155	CK28
CSW28-100-2Z CSW28-100-2RS	4	28	23.9	1	12.3	M5	14.9	9.7	120	100	25	50	2	195	CK28
CSW28-125-2Z CSW28-125-2RS	5	28	23.9	1	12.3	M5	14.9	9.7	145	125	25	25	4	240	CK28
CSW28-150-2Z CSW28-150-2RS	6	28	23.9	1	12.3	M5	14.9	9.7	170	150	25	50	3	290	CK28
CSW43-120-2Z CSW43-120-2RS	3	43	37	2.5	21	M8	24.9	14.5	140	120	32.5	55	2	530	CK43
CSW43-150-2Z CSW43-150-2RS	4	43	37	2.5	21	M8	24.9	14.5	170	150	35	80	2	680	CK43
CSW43-190-2Z CSW43-190-2RS	5	43	37	2.5	21	M8	24.9	14.5	210	190	35	40	4	840	CK43
CSW43-230-2Z CSW43-230-2RS	6	43	37	2.5	21	M8	24.9	14.5	250	230	35	80	3	1010	CK43
CSW63-180-2ZR	3	63	49.8	2	28	M8	39.5	19.5	200	180	9	54	4	1660	CK63
CSW63-235-2ZR	4	63	49.8	2	28	M8	39.5	19.5	255	235	9.5	54	5	2170	CK63
CSW63-290-2ZR	5	63	49.8	2	28	M8	39.5	19.5	310	290	10	54	6	2670	CK63



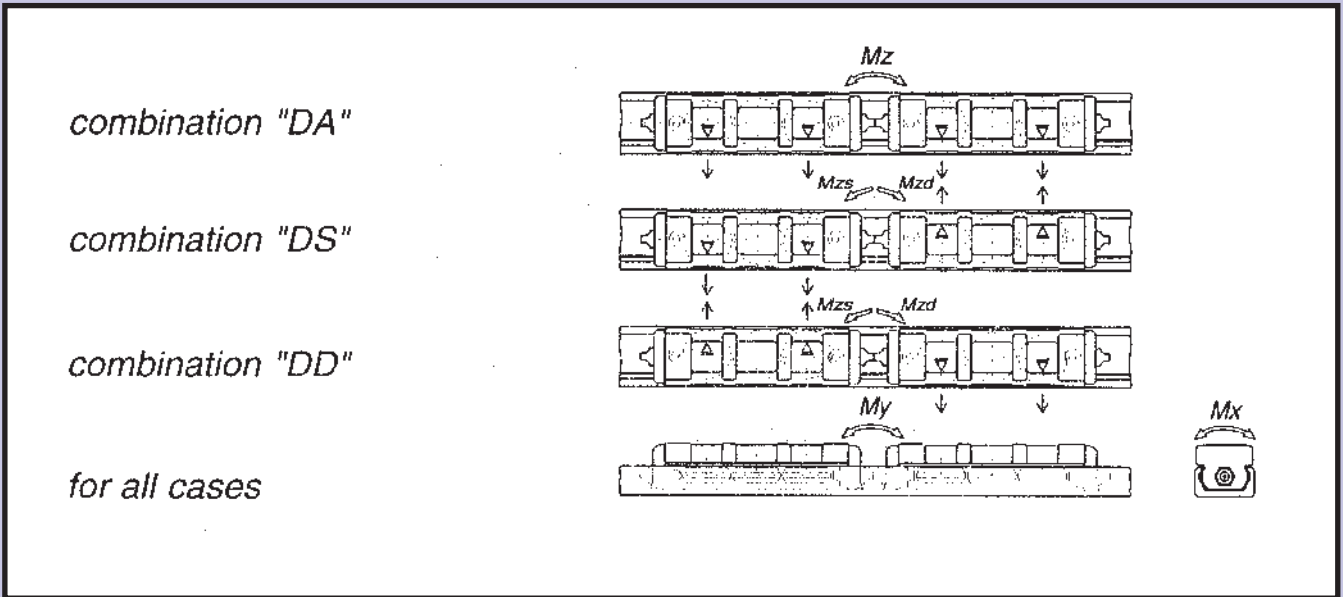
type	C (N)	C _{0 rad} (N)	C _{0 ax} (N)	M _x (Nm)	M _y (Nm)	M _z (Nm)	
						M _{zs}	M _{zd}
NCS18	1080	685	130	0.77	2.36	7.4	
NCS28	3090	1815	365	3.58	8.30	24.5	
NCS43	8420	4900	1085	16.20	37.40	100	
NCX63	30750	12500	6000	125	138	367	
CSW18-60-..	1080	685	130	0.77	2.36	7.4	
CSW18-80-..-A	1080	685	150	1.43	3.54	7.4	22.2
CSW18-80-..-B	1080	685	150	1.43	3.54	22.2	7.4
CSW18-100-..	1290	815	180	1.43	4.72	22.2	
CSW18-120-..-A	1290	815	220	1.71	5.90	22.2	37
CSW18-120-..-B	1290	815	220	1.71	5.90	37	22.2
CSW28-80...	3085	1815	365	3.58	8.3	24.5	
CSW28-100-..-A	3085	1815	430	6.62	12.4	24.5	73.5
CSW28-100-..-B	3085	1815	430	6.62	12.4	73.5	24.5
CSW28-125-..	3670	2155	515	6.62	16.6	73.5	
CSW28-150-..-A	3670	2155	615	7.87	20.7	73.5	122.5
CSW28-150-..-B	3670	2155	615	7.87	20.7	122.5	73.5
CSW43-120-..	8420	4900	1085	16.2	37.4	100	
CSW43-150-..-A	8420	4900	1280	29.9	56.2	100	300
CSW43-150-..-B	8420	4900	1280	29.9	56.2	300	100
CSW43-190-..	10000	5830	1530	29.9	74.9	300	
CSW43-230-..-A	10000	5830	1825	35.6	93.6	300	500
CSW43-230-..-B	10000	5830	1825	35.6	93.6	500	300
CSW63-180-2ZR	30750	12500	6000	125	138	367	
CSW63-235-2ZR-A	30750	12500	7200	250	413	367	1100
CSW63-235-2ZR-B	30750	12500	7200	250	413	1100	367
CSW63-290-2ZR	36600	15000	8500	250	511	1100	
CSW63-345-2ZR-A	36600	15000	10000	350	689	1100	1830

The grease nipples mounted on the heads cannot be removed because they are an integral part of the slider fixing system. The slider NCS18 does not have grease nipples on the heads.

The type of wiper, T or U, must be indicated in the order code.
 Example: NCS18-U indicates a slider series NCS18 fit for a U rail.
 Example: CSW43-190-22-U indicates a slider suitable for rails series U.
 If no letter is specified, a slider for T rail will be supplied.

6 Slide Track- Load Capacity (Combination)

When two sliders are placed in line, the three possible combinations give the load capacities indicated below

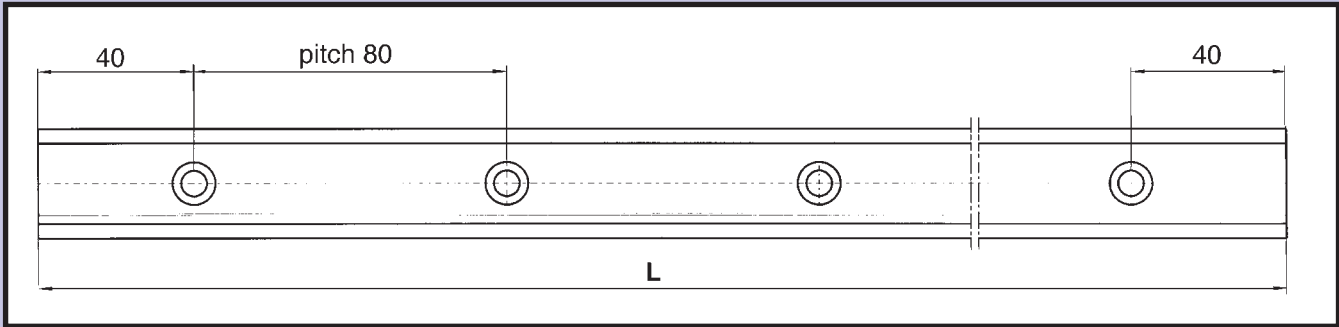


type	C (N)	C _{0 rad} (N)	C _{oax} (N)	M _x (Nm)	M _y (Nm)	M _z (Nm)	
						M _{zs}	M _{zd}
NCS18 comb.'DA'	2160	1370	195	1.55	9.62	27.4	
NCS28 comb.'DA'	6180	3630	550	7.16	45.20	121.5	
NCS43 comb.'DA'	16840	9800	1625	32	184	450	
NCX63 comb. 'DA'	61500	25000	9000	250	1350	1755	
NCS18 comb.'DS'	1620	1055	260	2.31	9.62	50.7	27.4
NCS28 comb.'DS'	4630	2720	730	10.74	45.20	225	121.5
NCS43 comb.'DS'	12630	7350	2170	48.6	184	833	450
NCX63 comb. 'DS'	46150	18750	12000	375	1350	2800	1755
NCS18 comb.'DD'	1620	1055	260	2.31	9.62	27.4	50.7
NCS28 comb.'DD'	4630	2720	730	10.74	45.20	121.5	225
NCS43 comb.'DD'	12630	7350	2170	48.6	184	450	833
NCX63 comb. 'DD'	46150	18750	12000	375	1350	1755	2800

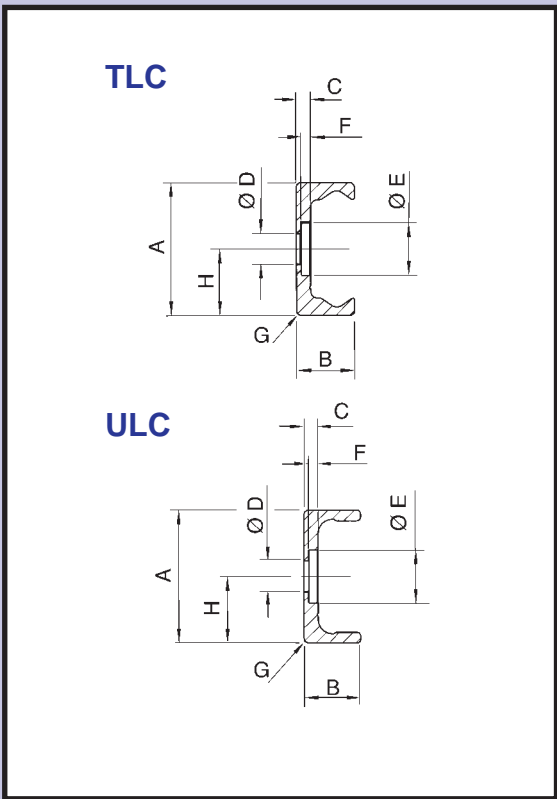
The most widespread solution for general applications

Induction hardened raceways are protected against oxidation through electrolytic zinc plating according to ISO 2081 standards. The raceways are honed to improve the surface finish and reduce the friction coefficient. TLC and ULC series track-rails are available in the standard lengths indicated in the tables below.

Longer lengths are available by butt joining (contact Automation for details).



Series TLC18 - ULC18 (c'sunk holes for screws M4 x 0.7 DIN 7991)										
L (mm)	160	240	320	400	480	560	640	720	800	880
L (mm)	960	1040	1120	1200	1280	1360	1440	1520	1600	1680
L (mm)	1760	1840	1920	2000						
Series TLC28 - ULC28 (c'sunk holes for screws M5 x 0.8 DIN 7991)										
L (mm)	240	320	400	480	560	640	720	800	880	960
L (mm)	1040	1120	1200	1280	1360	1440	1520	1600	1680	1760
L (mm)	1840	1920	2000	2080	2160	2240	2320	2400	2480	2560
L (mm)	2640	2720	2800	2880	2960	3040	3120	3200		
Series TLC43 - ULC43 (c'sunk holes for screws M8 x 1.25 PIN 7991)										
L (mm)	400	480	560	640	720	800	880	960	1040	1120
L (mm)	1200	1280	1360	1440	1520	1600	1680	1760	1840	1920
L (mm)	2000	2080	2160	2240	2320	2400	2480	2560	2640	2720
L (mm)	2800	2880	2960	3040	3120	3200	3280	3360	3440	3520
L (mm)	3600									
Series TLC63 - ULC63 (c'sunk holes for screws M8 x 1.25 PIN 7991)										
L (mm)	560	640	720	800	880	960	1040	1120	1200	1280
L (mm)	1360	1440	1520	1600	1680	1760	1840	1920	2000	2080
L (mm)	2160	2240	2320	2400	2480	2560	2640	2720	2800	2880
L (mm)	2960	3040	3120	3200	3280	3360	3440	3520	3600	



Rail Type	A	B	C	DØ	EØ	F	G	H
TLC18	18	8.25	2.8	5	9.5	2	R1.5	9
ULC18	18	8.25	2.6	5	9.5	1.9	R1	9
TLC28	28	12.25	3	6.4	11	2	R1	14
ULC28	28	12.00	3	6.4	11	2	R1	14
TLC43	43	21	4.5	10.5	18	3.1	R2.5	21.5
ULC43	43	21	4.5	10.5	18	3.1	R1	21.5
TLC63	63	28	8	9	15	5.2	2 x 45°	31.5
ULC63	63	28	8	9	15	5.2	2 x 45°	31.5

Order Code: Ordering mounted sliders and rails, the order codes first three letters identify rail shape. The next number states the total length of the rail. The number between the two oblique strokes, indicate the number of sliders mounted in the total length. The next code identifies the slider type.

Example: ULC63—200/2/NCX63

ULC63 (Rail type/size) —200 (Total length) /2 (No. of sliders) / NCX63 (slider type)