

TELESCOPIC RAIL

Data sheet - rev. 1.3



LINEAR COMPONENTS

myRollon

MyRollon is **your digital working platform** for linear guides, telescopic slides, actuators and actuator systems.

With myRollon, it is possible to determine the best linear motion solution according to our application specifications.

SCAN ME!



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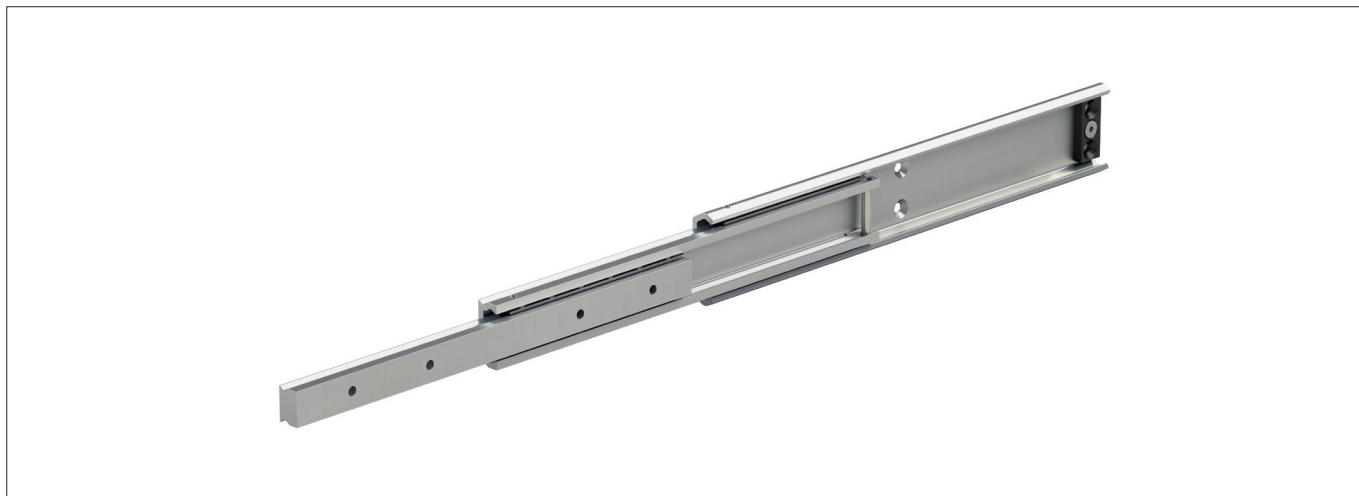
► ORDERING KEY

■ Ordering key

NTA	048	1000	XX										
NTT													
NDC													
NTB													
NTV													
HGTX													
NTU													
NTSU													
				Option: For some types several options possible. Available options depending on type or size.									
		Installation length											
		Installation Size											
Rail type													

Ordering example: NTT048-1000-EOG

► FEATURES AND ADVANTAGES



Telescopic Rails

Nadella telescopic slides are special ball bearing guides for high load rating. Two or more ball bearing mounted guide rails high reliability. According to the requirements a combination of different manufactured parts is used (rolled parts, cold-rolled steel and machined parts). Load and extension proportions are the basic characteristics of the telescopic slides. The model line is made up of four types and three extension performances.

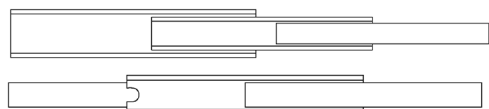
PARTIAL EXTENSION

extension length 60% of the assembly length



FULL EXTENSION

extension length 100% of the assembly length



OVER EXTENSION

extension length ca. 150 – 200% of the assembly length



Technical features:

- Speed $V_{max} = 0,5^* \text{ m/s}$
- Standard operating temperature from $+10^\circ\text{C}$ to $+80^\circ\text{C}$

*Continuous operation or more than 10 strokes/min will negatively influence the lifetime. If higher dynamics are required you should use a bigger oversized guide rail.

Guide Rail

	Guide Rail	Cage	Ball
Standard	C45	Steel Coated	100Cr6
Stainless Steel (NX2/NX4)	NX2 Load -30% = AISI304 NX4 Load -40% = AISI316	Stainless Steel	AISI304
Aluminium (A)	EN AW 6060 Load -70%	Stainless Steel	AISI304

Tab. 1

As standard NC1 we offer the telescopic slides coated by zinc coating (Fe/Zn8/Top-Coat) with thick-layer passivation acc. to RoHS. The surface is silver shining with a slight blue gleam.

Anticorrosion coating

Shortcut	Coating	RoHS	Salt bath spraytest
-	Zinc plating	yes	about 96 hrs.
NC4	Zinc Nickel Plated with Passivation	yes	over 700 hrs.

Tab. 2

Standard Lengths' Tolerances

Installation Length (mm)	Tolerance (mm)
$\geq 150 < 420$	$\pm 0,5$
$\geq 420 < 1050$	$\pm 0,8$
$\geq 1050 < 2200$	$\pm 1,2$

Tab. 3

MAIN ADVANTAGES

High load capacity

Low deflection due to sturdy profiles

Over extension up to 200%

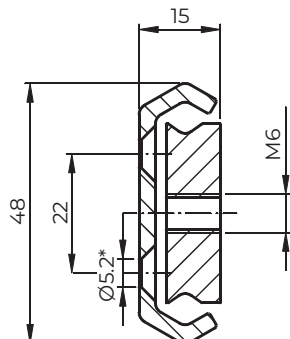
End stop dampers and catches available

► COMPONENTS AND DIMENSIONS

■ Partial extension

NTT048

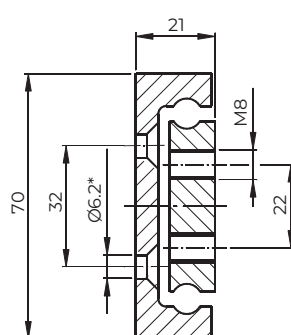
See page 8



* for M5 ISO 10642 screw

NTA070

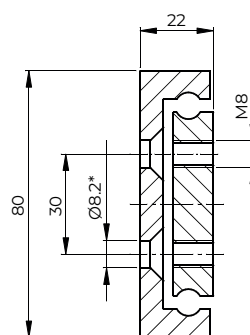
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* for M6 ISO 10642 screw

NTA080

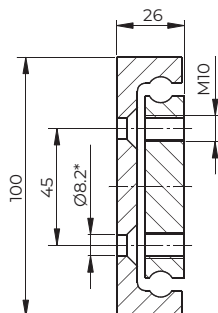
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* for M8 ISO 10642 screw

NTA100

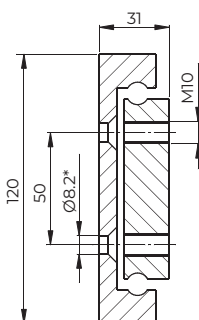
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* for M8 ISO 10642 screw

NTA120

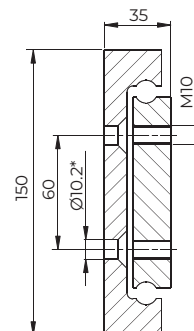
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* for M8 ISO 10642 screw

NTA150

See page 13

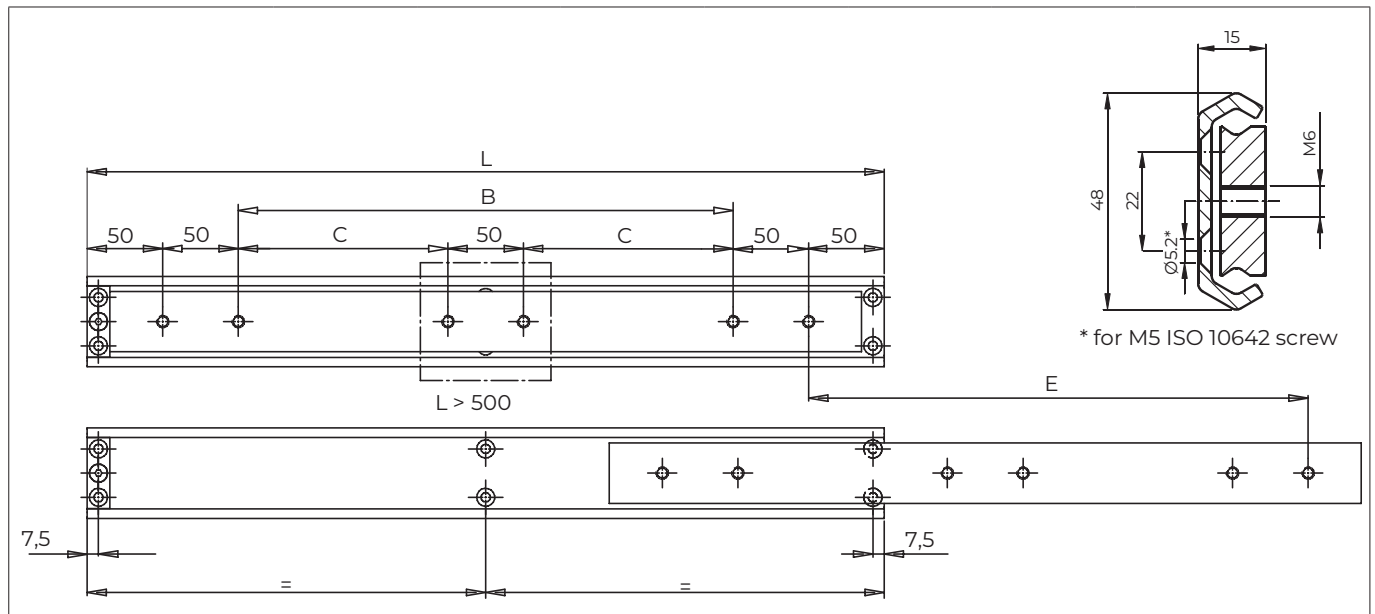
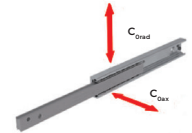


* for M10 ISO 10642 screw

		Technical Manual				Material				Options											
Product group	Designation	L from	L to	Extension length	Load (N)	ST	NX2	NX4	A	VG	VO	VOG	EHG	EHO	EOG	EDG	NC4	FDOG	VR	VRM	
Partial Extension	NTT048	300	1200	~ 60%	400-1800	x				x	x	x	x	x	x	x			x		
	NTA070	500	1700	~ 60%	1000-4200	x	x	x	x	x	x	x	x	x	x	x	x		x		
	NTA080	500	1700	~ 60%	750-5000	x	x	x	x	x	x	x	x	x	x	x	x		x		
	NTA100	700	2000	~ 60%	1500-10000	x	x	x	x	x	x	x				x	x		x		
	NTA120	700	2100	~ 60%	1650-12000	x	x	x	x	x	x	x				x	x		x		
	NTA150	700	2200	~ 60%	2000-15500	x	x	x	x	x	x	x				x	x		x		

Legend	
LS	increased clearance for temperatures > 200 °C
ST	Standard steel with Zinc-Plating
NX2	AISI 304 profiles, cage and balls
A	Aluminium profiles, AISI 304 cage and balls
VG	guide locking in closed position with manual lever
VO	guide locking in open position with manual lever
VOG	guide locking in open and closed position with manual lever
EHG	forced opening and closing by spring pressure plungers
EHO	forced closure by spring pressure plungers
EOG	forced opening by spring plungers
EDG	rubber damper when retracted
NC4	zinc-nickel plating treatment on profiles - AISI 304 balls and cages
FDOG	spring damper when retracted
VR	extraction in both directions
VRM	synchronous extraction in both directions by means of a cam system
AZ	special extraction length NTT48-1000-AZ1080 = Extension Length 1080 mm
VS1	reduced clearance – preload class VS1
VS2	reduced clearance – preload class VS2
LL	increased clearance for temperatures up to 200 °C
NX4	AISI 316 profiles, cage and balls

NTT048 - Partial extension



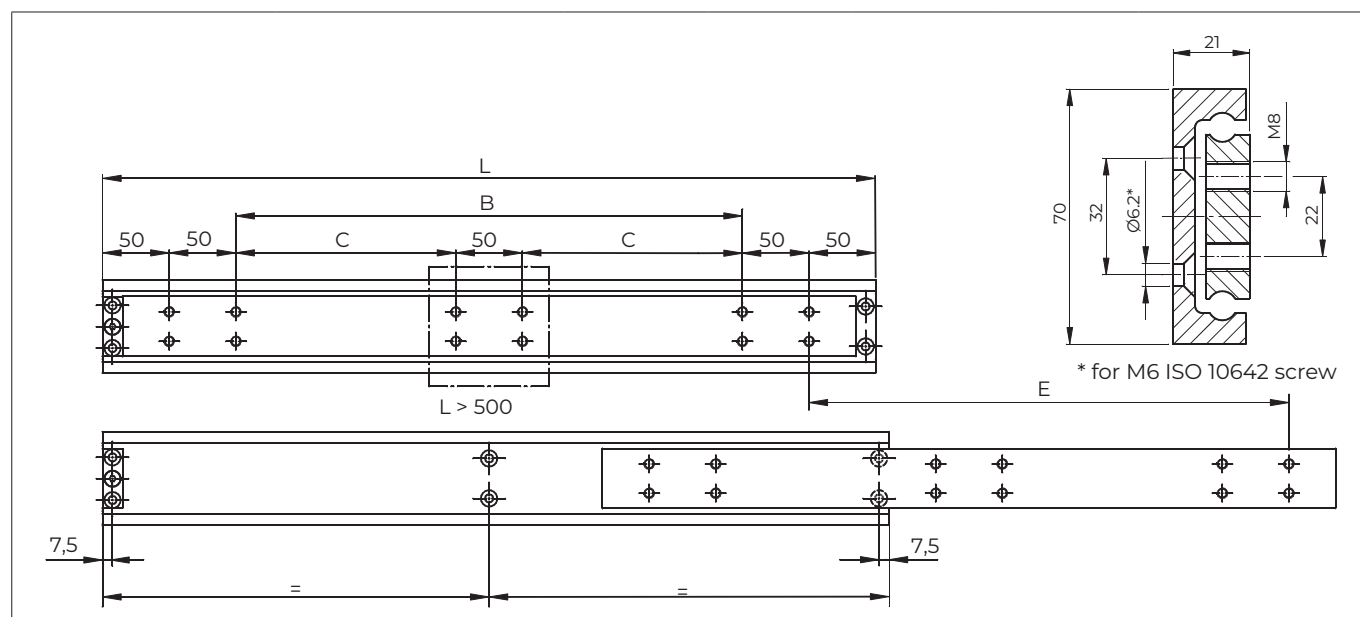
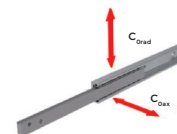
Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC _{grad} [N]	C _{max} [N]	[kg]
NTT048-300	100		300	180	1550	775	1.0
NTT048-350	150		350	230	1650	825	1.2
NTT048-400	200		400	260	1750	875	1.4
NTT048-450	250		450	310	1850	925	1.6
NTT048-500	300		500	340	1800	900	1.8
NTT048-550		150	550	370	1750	875	1.9
NTT048-600		175	600	400	1700	850	2.1
NTT048-650		200	650	430	1650	825	2.2
NTT048-700		225	700	460	1600	800	2.4
NTT048-750		250	750	490	1500	750	2.6
NTT048-800		275	800	520	1400	700	2.7
NTT048-850		300	850	550	1300	650	2.9
NTT048-900		325	900	600	1200	600	3.1
NTT048-950		350	950	630	1100	550	3.3
NTT048-1000		375	1000	660	1000	500	3.5
NTT048-1100		425	1100	720	800	400	3.7
NTT048-1200		475	1200	800	600	300	4.1

Tab. 4

MATERIAL: Zinc-plated steel

For options or special request, please contact our application engineering division

NTA070 - Partial extension



Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC _{grad} [N]	C _{0ax} [N]	[kg]
NTA070-500	300		500	300	3700	1850	4.5
NTA070-550		150	550	330	3900	1950	5.0
NTA070-600		175	600	360	4200	2100	5.5
NTA070-650		200	650	390	4150	2075	6.0
NTA070-700		225	700	420	4100	2050	6.5
NTA070-750		250	750	450	4050	2025	6.9
NTA070-800		275	800	480	3800	1900	7.4
NTA070-850		300	850	510	3700	1850	7.8
NTA070-900		325	900	540	3600	1800	8.3
NTA070-950		350	950	570	3450	1725	8.8
NTA070-1000		375	1000	600	3300	1650	9.3
NTA070-1100		425	1100	660	3100	1550	10.2
NTA070-1200		475	1200	720	2900	1450	11.1
NTA070-1300		525	1300	780	2700	1350	12.0
NTA070-1400		575	1400	840	2400	1200	12.9
NTA070-1500		625	1500	900	2100	1150	13.9
NTA070-1600		675	1600	960	1800	900	14.8
NTA070-1700		725	1700	1020	1500	750	15.7

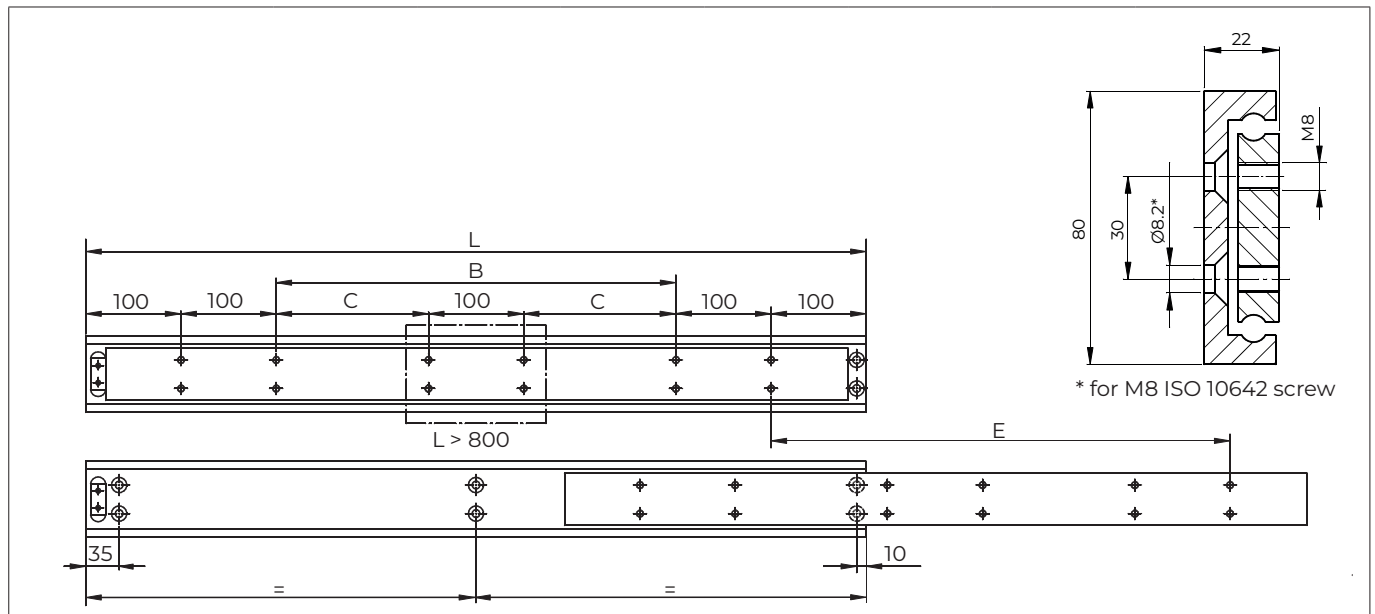
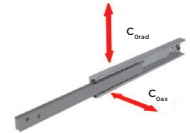
Tab. 5

MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

NTA080 - Partial extension



Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC_{grad} [N]	C_{ox} [N]	[kg]
NTA080-500	100		500	300	4800	2400	5.2
NTA080-550	150		550	330	4900	2450	5.7
NTA080-600	200		600	360	5000	2500	6.2
NTA080-650	250		650	390	4900	2450	6.7
NTA080-700	300		700	420	4800	2400	7.3
NTA080-750	350		750	450	4700	2350	7.7
NTA080-800	400		800	480	4600	2300	8.3
NTA080-850		175	850	510	4500	2250	8.8
NTA080-900		200	900	540	4400	2200	9.3
NTA080-950		225	950	570	4250	2125	9.8
NTA080-1000		250	1000	600	4100	2050	10.4
NTA080-1100		300	1100	660	3800	1900	11.4
NTA080-1200		350	1200	720	3500	1750	12.4
NTA080-1300		400	1300	780	3200	1600	13.5
NTA080-1400		450	1400	840	2900	1450	14.5
NTA080-1500		500	1500	900	2600	1300	15.6
NTA080-1600		550	1600	960	2300	1150	16.6
NTA080-1700		600	1700	1020	2000	1000	17.7

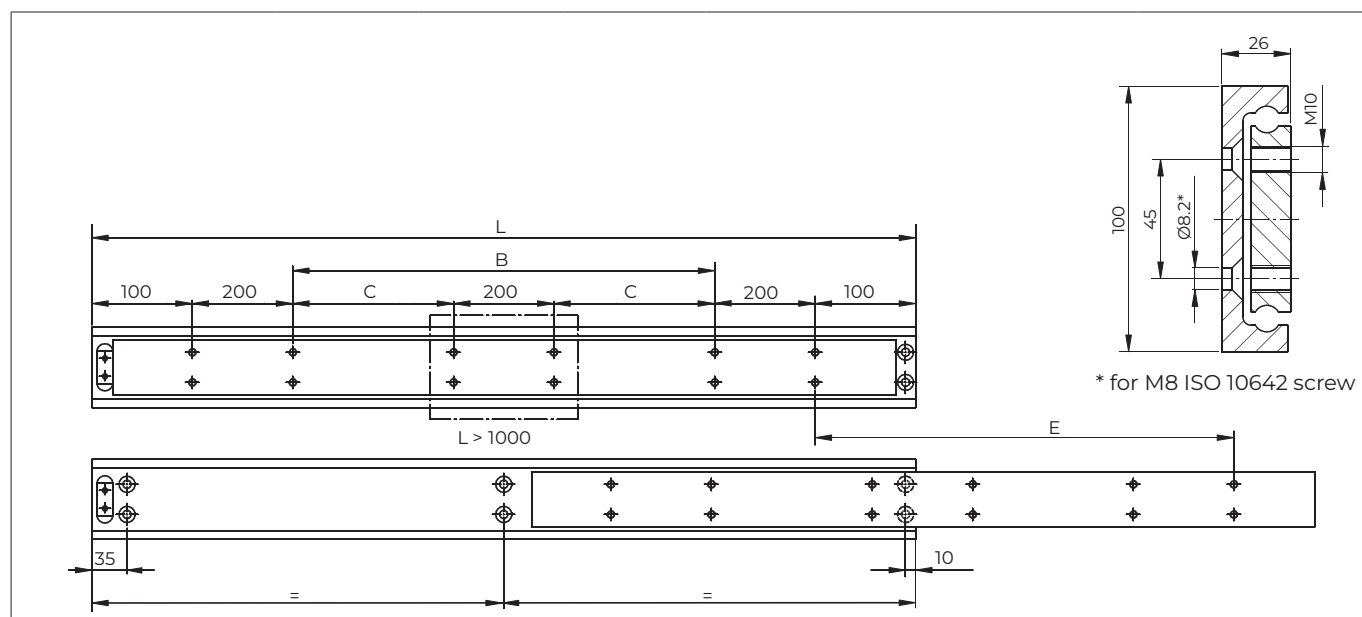
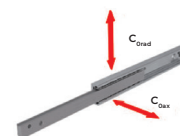
Tab. 6

MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

NTA100 - Partial extension



Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC _{rad} [N]	C _{ax} [N]	[kg]
NTA100-700	100		700	420	9000	4500	12.0
NTA100-750	150		750	450	9500	4750	12.8
NTA100-800	200		800	480	10000	5000	13.6
NTA100-850	250		850	510	9750	4875	14.0
NTA100-900	300		900	540	9500	4750	15.4
NTA100-950	350		950	570	9250	4625	16.2
NTA100-1000	400		1000	600	9000	4500	17.0
NTA100-1100		150	1100	660	8500	4250	18.7
NTA100-1200		200	1200	720	8000	4000	20.4
NTA100-1300		250	1300	780	7500	3750	22.1
NTA100-1400		300	1400	840	6900	3450	27.8
NTA100-1500		350	1500	900	6300	3150	25.5
NTA100-1600		400	1600	960	5700	2850	27.2
NTA100-1700		450	1700	1020	5100	2550	28.9
NTA100-1800		500	1800	1080	4500	2550	30.6
NTA100-1900		550	1900	1140	3900	1950	32.3
NTA100-2000		600	2000	1200	3300	1650	34.0

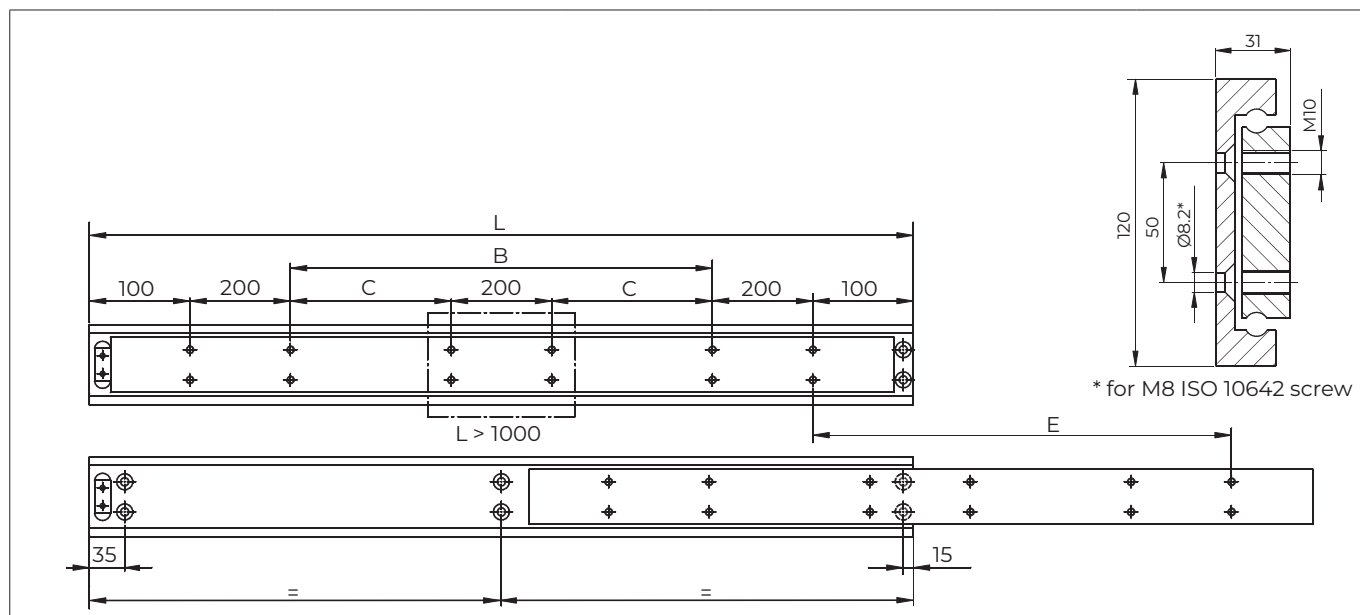
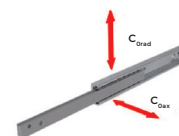
Tab. 7

MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

NTA120 - Partial extension



Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC _{grad} [N]	C _{ox} [N]	[kg]
NTA120-700	100		700	420	11500	5750	16.6
NTA120-750	150		750	450	12000	6000	17.8
NTA120-800	200		800	480	12000	6000	19.0
NTA120-850	250		850	510	12000	6000	20.2
NTA120-900	300		900	540	11700	5850	21.4
NTA120-950	350		950	570	11400	5700	22.5
NTA120-1000	400		1000	600	11000	5500	23.7
NTA120-1100		150	1100	660	10800	5400	26.1
NTA120-1200		200	1200	720	10300	5150	28.5
NTA120-1300		250	1300	780	9800	4900	30.8
NTA120-1400		300	1400	840	9300	4650	33.2
NTA120-1500		350	1500	900	8700	4350	35.6
NTA120-1600		400	1600	960	8100	4050	38.0
NTA120-1700		450	1700	1020	7400	3700	40.3
NTA120-1800		500	1800	1080	6700	3350	42.7
NTA120-1900		550	1900	1140	5700	2850	45.1
NTA120-2000		600	2000	1200	4700	2350	47.5
NTA120-2100		650	2100	1260	3700	1850	49.4

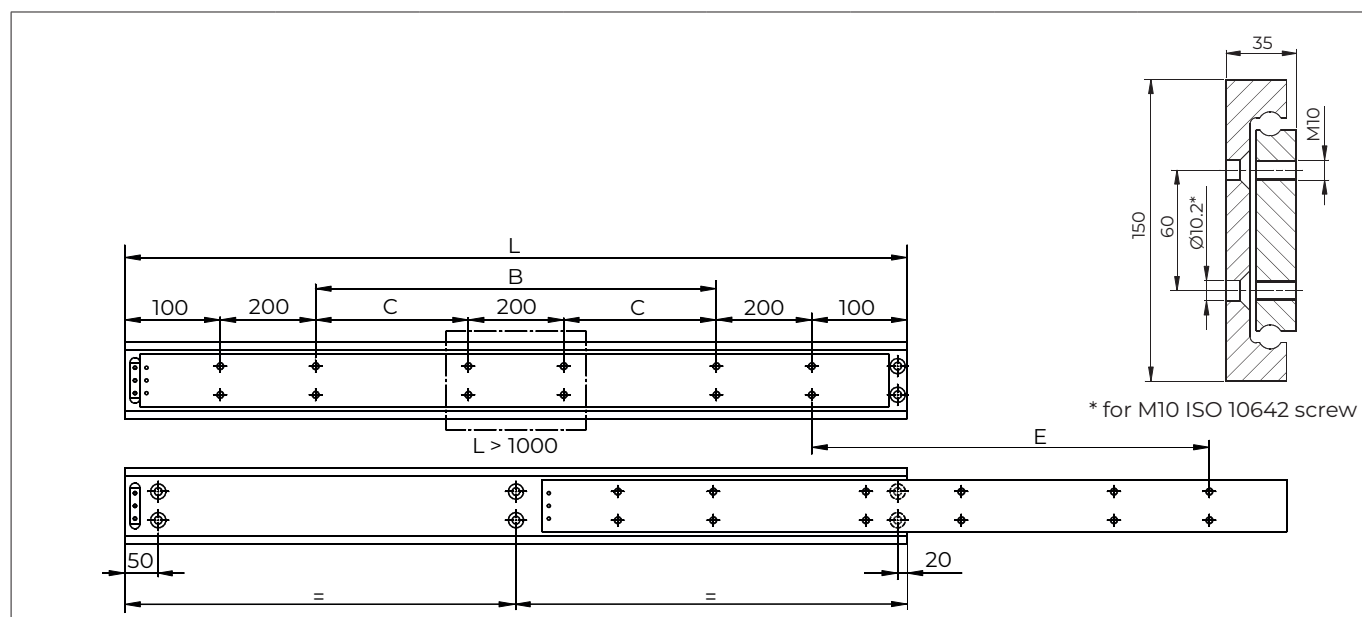
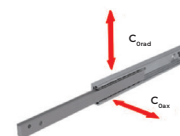
Tab. 8

MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

NTA150 - Partial extension



Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC _{grad} [N]	C _{max} [N]	[kg]
NTA150-700	100		700	420	14500	7250	24.2
NTA150-750	150		750	450	15000	7500	25.9
NTA150-800	200		800	480	15500	7750	27.7
NTA150-850	250		850	510	15500	7750	29.4
NTA150-900	300		900	540	15000	7500	31.1
NTA150-950	350		950	570	14750	7375	32.9
NTA150-1000	400		1000	600	14500	7250	34.6
NTA150-1100		150	1100	660	14100	7050	38.0
NTA150-1200		200	1200	720	13300	6650	41.5
NTA150-1300		250	1300	780	12500	6250	45.0
NTA150-1400		300	1400	840	11700	5850	48.4
NTA150-1500		350	1500	900	10900	5450	51.9
NTA150-1600		400	1600	960	10000	5000	55.3
NTA150-1700		450	1700	1020	9100	4550	58.8
NTA150-1800		500	1800	1080	8200	4100	62.3
NTA150-1900		550	1900	1140	7300	3650	65.7
NTA150-2000		600	2000	1200	6400	3200	69.1
NTA150-2100		650	2100	1260	5500	2750	71.9
NTA150-2200		700	2200	1320	4500	2250	75.3

Tab. 9

MATERIAL: Zinc-plated steel

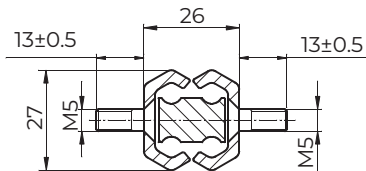
ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

■ Full extension

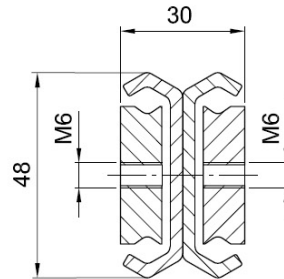
NTB027

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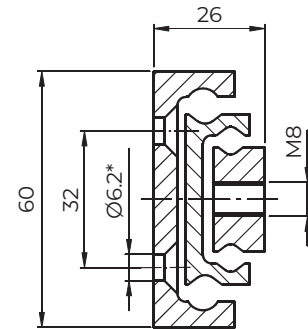
NDC048

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NTV060

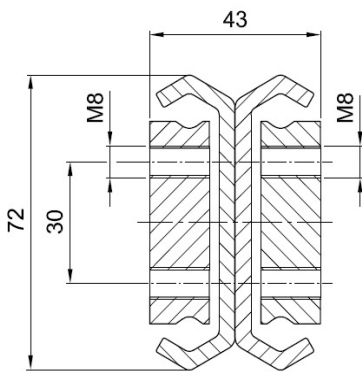
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* for M6 ISO 10642 screw

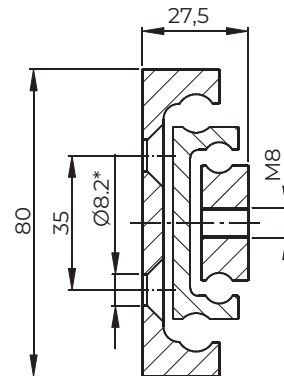
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NTV080

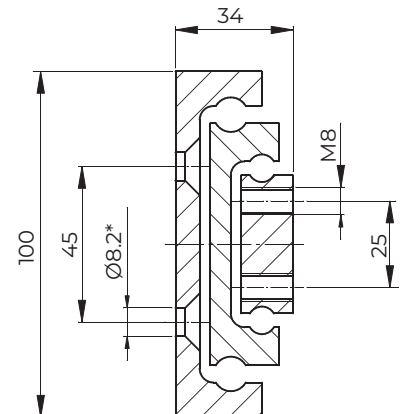
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* for M8 ISO 10642 screw

NTV100

See page 21

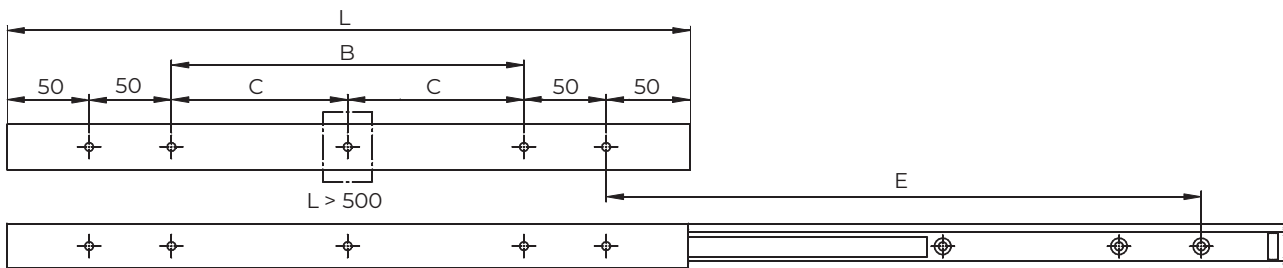
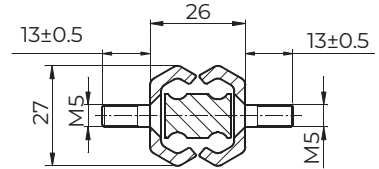
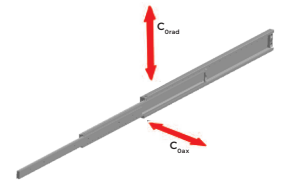


* for M8 ISO 10642 screw

		Technical Manual				Material				Options										
Product group	Designation	L from	L to	Extension length	Load (N)	ST	NX2	NX4	A	VG	VO	VOG	EHG	EHO	EOG	EDG	NC4	FDOG	VR	VRM
Full Extension	NTB027	250	1300	~100%	700-1200	x							x	x	x	x	x		x	
	NDC048	300	1500	~100%	710-1910	x							x	x	x	x	x		x	
	NTV060	300	1500	~100%	800-2900	x	x	x	x	x	x	x	x	x	x	x	x		x	x
	NDC072	300	2000	~100%	1600-3900	x				x	x	x	x	x	x	x	x		x	
	NTV080	500	2000	~100%	500-2250	x	x	x	x	x	x	x	x	x	x	x	x		x	x
	NTV100	600	2000	~100%	500-2500	x	x	x	x	x	x	x					x		x	x

Legend	
LS	increased clearance for temperatures > 200 °C
ST	Standard steel with Zinc-Plating
NX2	AISI 304 profiles, cage and balls
A	Aluminium profiles, AISI 304 cage and balls
VG	guide locking in closed position with manual lever
VO	guide locking in open position with manual lever
VOG	guide locking in open and closed position with manual lever
EHG	forced opening and closing by spring pressure plungers
EHO	forced closure by spring pressure plungers
EOG	forced opening by spring plungers
EDG	rubber damper when retracted
NC4	zinc-nickel plating treatment on profiles - AISI 304 balls and cages
FDOG	spring damper when retracted
VR	extraction in both directions
VRM	synchronous extraction in both directions by means of a cam system
AZ	special extraction length NTT48-1000-AZ1080 = Extension Length 1080 mm
VS1	reduced clearance – preload class VS1
VS2	reduced clearance – preload class VS2
LL	increased clearance for temperatures up to 200 °C
NX4	AISI 316 profiles, cage and balls

NTB027 - Full extension



Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC _{grad} [N]	C _{0ax} [N]	[kg]
NTB027-250	50		250	250	1100	550	1.0
NTB027-300	100		300	300	1150	575	1.2
NTB027-350	150		350	350	1180	590	1.4
NTB027-400	200		400	400	1200	600	1.6
NTB027-450	250		450	450	1180	590	1.8
NTB027-500	300		500	500	1150	575	2.0
NTB027-550		175	550	550	1029	564,5	2.2
NTB027-600		200	600	600	1090	545	2.4
NTB027-650		225	650	650	1060	530	2.6
NTB027-700		250	700	700	1030	515	2.8
NTB027-750		275	750	750	1000	500	3.0
NTB027-800		300	800	800	970	485	3.2
NTB027-850		325	850	850	940	470	3.4
NTB027-900		350	900	900	910	455	3.6
NTB027-950		375	950	950	880	440	3.8
NTB027-1000		400	1000	1000	850	425	4.0
NTB027-1100		450	1100	1100	800	400	4.4
NTB027-1200		500	1200	1200	750	375	4.8
NTB027-1300		550	1300	1300	700	350	5.2

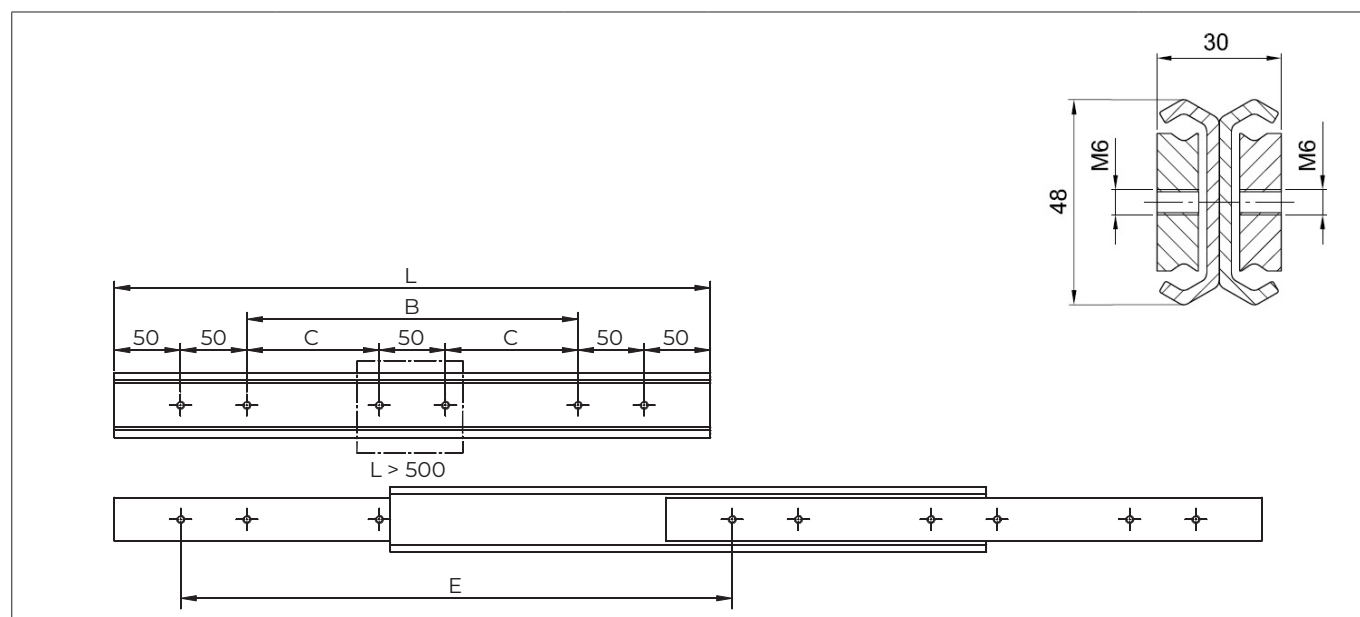
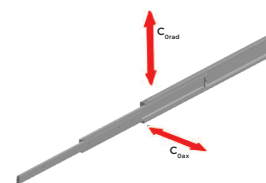
Tab. 10

MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

NDC048 - Full extension



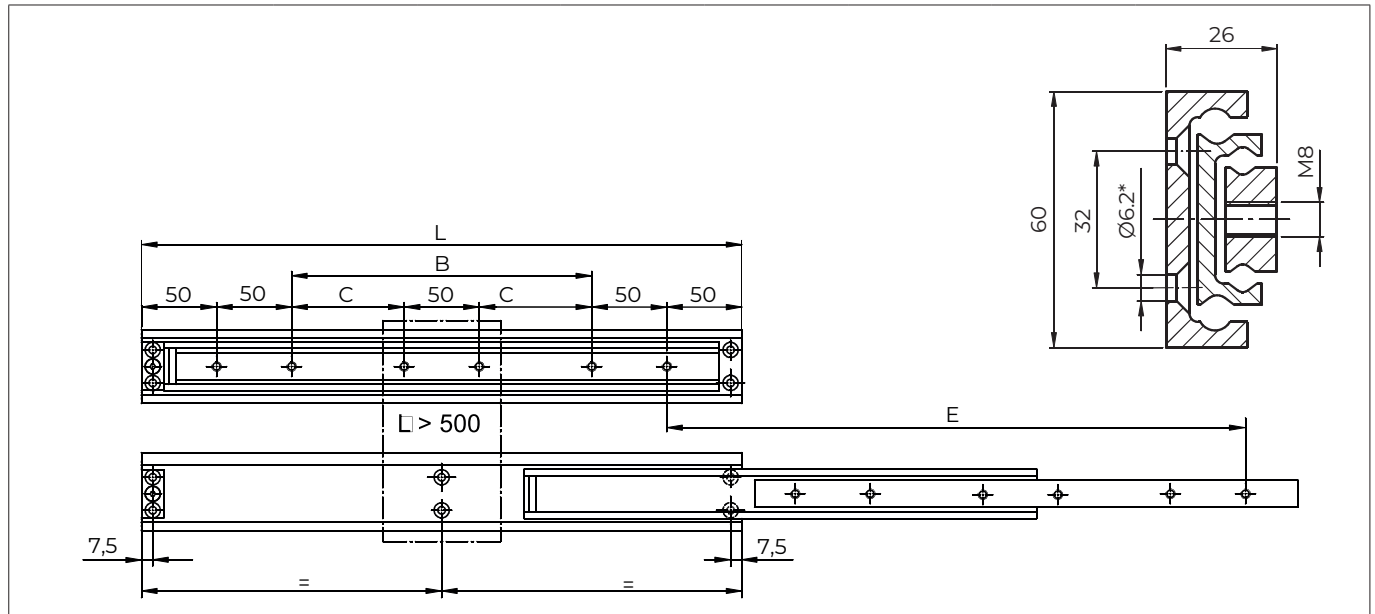
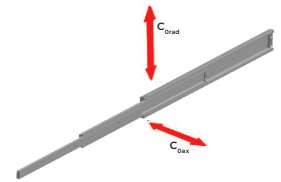
Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC_{grad} [N]	C_{0ax} [N]	[kg]
NDC048-300	100		300	300	10810	905	2.6
NDC048-350	150		350	350	1860	930	3.0
NDC048-400	200		400	400	1910	955	3.4
NDC048-450	250		450	450	1860	930	3.9
NDC048-500	300		500	500	1810	905	4.3
NDC048-550		150	550	550	1760	880	4.8
NDC048-600		175	600	600	1710	855	5.2
NDC048-650		200	650	650	1660	830	5.6
NDC048-700		225	700	700	1610	805	6.1
NDC048-750		250	750	750	1560	780	6.5
NDC048-800		275	800	800	1510	755	7.0
NDC048-850		300	850	850	1460	830	7.4
NDC048-900		325	900	900	1410	705	7.9
NDC048-950		350	950	950	1360	680	8.3
NDC048-1000		375	1000	1000	1310	655	8.7
NDC048-1100		425	1100	1100	1210	605	9.6
NDC048-1200		475	1200	1200	1110	555	10.5
NDC048-1300		525	1300	1300	1010	505	11.4
NDC048-1400		575	1400	1400	910	455	12.3
NDC048-1500		625	1500	1500	810	405	13.2

Tab. 11

MATERIAL: Zinc-plated steel

For options or special request, please contact our application engineering division

NTV060 - Full extension



Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC _{grad} [N]	C _{0ax} [N]	[kg]
NTV060-300	100		300	300	2800	1400	2.6
NTV060-350	150		350	350	2850	1425	3
NTV060-400	200		400	400	2900	1450	3.0
NTV060-450	250		450	450	2850	1425	3.8
NTV060-500	300		500	500	2800	1400	4.2
NTV060-550		150	550	550	2800	1400	4.6
NTV060-600		175	600	600	2700	1350	5
NTV060-650		200	650	650	2650	1325	5.0
NTV060-700		225	700	700	2600	1300	5.8
NTV060-750		250	750	750	2550	1275	6.2
NTV060-800		275	800	800	2500	1250	6.6
NTV060-850		300	850	850	2450	1225	7
NTV060-900		325	900	900	2400	1200	7.0
NTV060-950		350	950	950	2330	1165	7.8
NTV060-1000		375	1000	1000	2250	1125	8.2
NTV060-1100		425	1100	1100	2100	1050	8.9
NTV060-1200		475	1200	1200	1950	975	9.7
NTV060-1300		525	1300	1300	1800	900	10.4
NTV060-1400		575	1400	1400	1700	850	11.3
NTV060-1500		625	1500	1500	1600	800	12.1

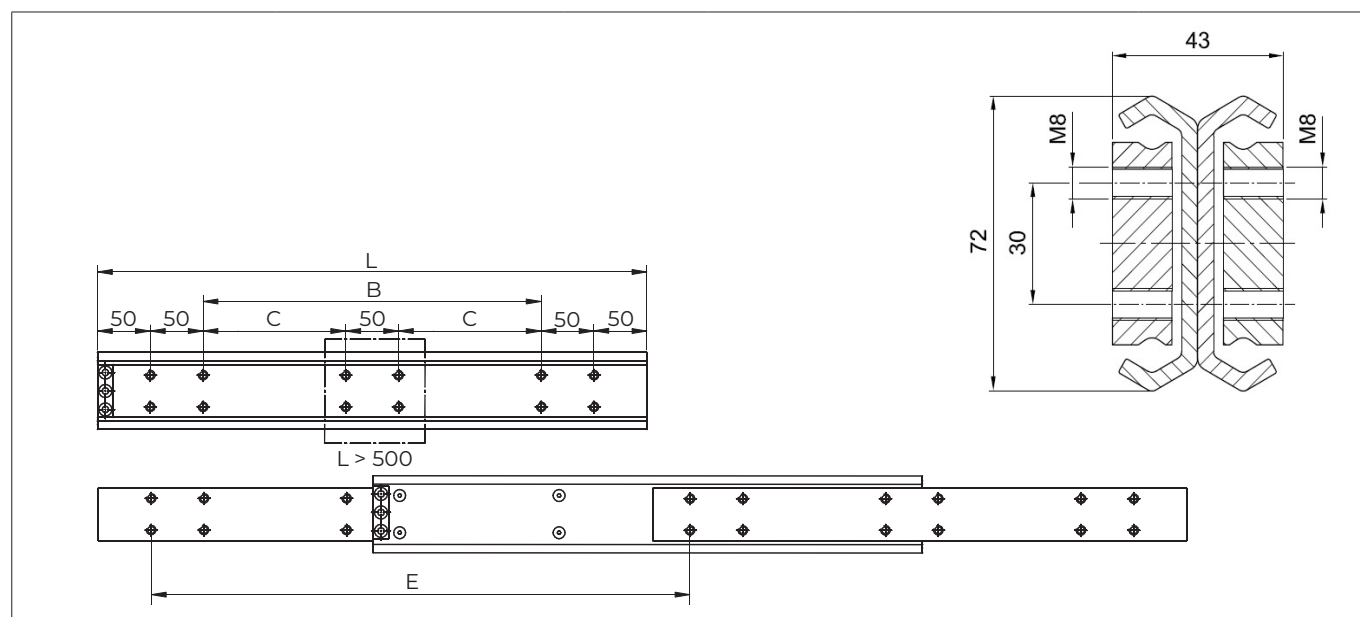
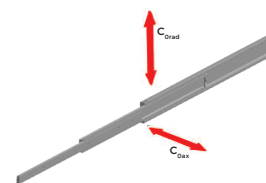
Tab. 12

MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

NDC072 - Full extension



Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC _{rad} [N]	C _{ax} [N]	[kg]
NDC072-300	100		300	300	3800	1900	5.4
NDC072-350	150		350	350	3850	1925	6.4
NDC072-400	200		400	400	3900	1950	7.3
NDC072-450	250		450	450	3850	1925	8.2
NDC072-500	300		500	500	3800	1900	9.2
NDC072--550		150	550	550	3750	1875	10.1
NDC072-600		175	600	600	3700	1850	11.1
NDC072-650		200	650	650	3650	1825	12.0
NDC072-700		225	700	700	3600	1800	13.0
NDC072-750		250	750	750	3550	1775	13.9
NDC072-800		275	800	800	3500	1750	14.8
NDC072-850		300	850	850	3450	1725	15.8
NDC072-900		325	900	900	3400	1700	16.7
NDC072-950		350	950	950	3350	1675	17.7
NDC072-1000		375	1000	1000	3300	1650	18.6
NDC072-1100		425	1100	1100	3200	1600	19.5
NDC072-1200		475	1200	1200	3100	1550	22.4
NDC072-1300		525	1300	1300	2950	1475	24.2
NDC072-1400		575	1400	1400	2800	1400	26.1
NDC072-1500		625	1500	1500	2650	1325	28.0
NDC072-1600		675	1600	1600	2500	1250	29.9
NDC072-1700		725	1700	1700	2300	1150	31.8
NDC072-1800		775	1800	1800	2100	1050	33.6
NDC072-1900		825	1900	1900	1900	950	35.5
NDC072-2000		875	2000	2000	1600	800	37.4

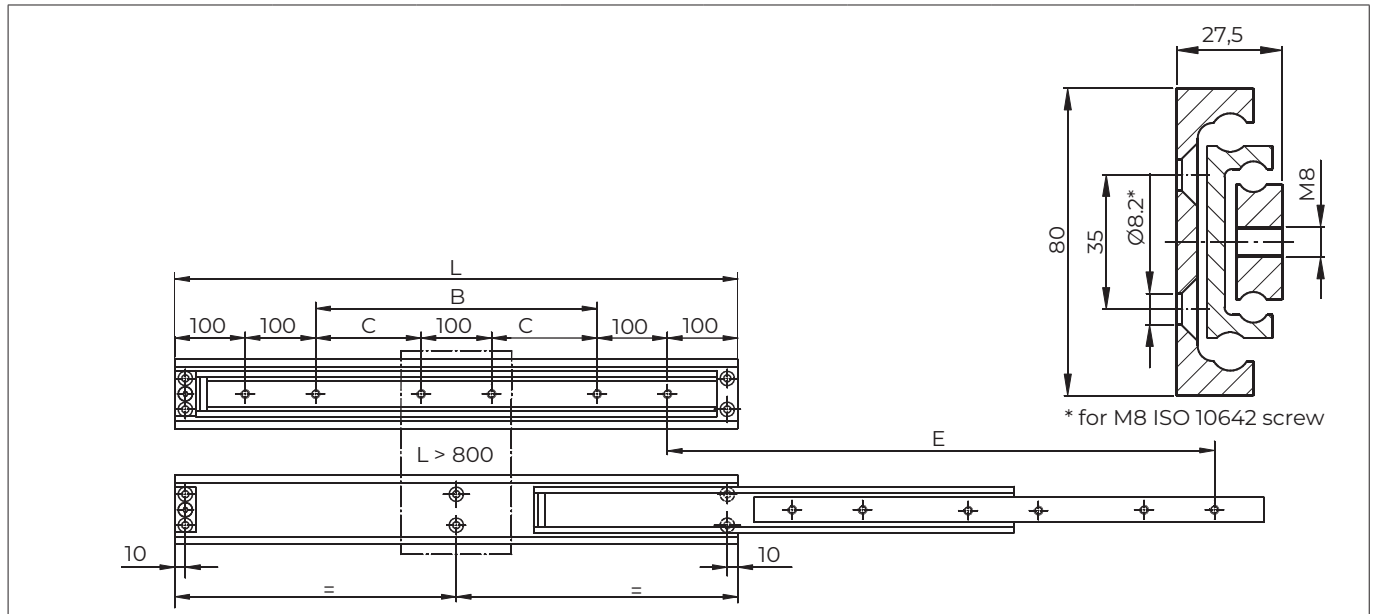
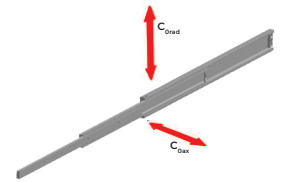
Tab. 13

MATERIAL: Zinc-plated steel

ON REQUEST: AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

NTV080 - Full extension



Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC _{grad} [N]	C _{ox} [N]	[kg]
NTV080-500	100		500	500	4350	2175	5.7
NTV080-550	150		550	550	4400	2200	6.3
NTV080-600	200		600	600	4450	2225	6.8
NTV080-650	250		650	650	4450	2225	7.4
NTV080-700	300		700	700	4450	2225	8.0
NTV080-750	350		750	750	4400	2200	8.6
NTV080-800	400		800	800	4350	2175	9.1
NTV080-850		175	850	850	4300	2150	9.7
NTV080-900		200	900	900	4200	2100	10.3
NTV080-950		225	950	950	4100	2050	10.8
NTV080-1000		250	1000	1000	4000	2000	11.4
NTV080-1100		300	1100	1100	3800	1900	12.5
NTV080-1200		350	1200	1200	3600	1800	13.7
NTV080-1300		400	1300	1300	3350	1675	14.8
NTV080-1400		450	1400	1400	3100	1550	15.9
NTV080-1500		500	1500	1500	2800	1400	17.1
NTV080-1600		550	1600	1600	2500	1250	18.2
NTV080-1700		600	1700	1700	2250	1125	19.4
NTV080-1800		650	1800	1800	2000	1000	20.5
NTV080-1900		700	1900	1900	1750	875	21.6
NTV080-2000		750	2000	2000	1500	750	22.8

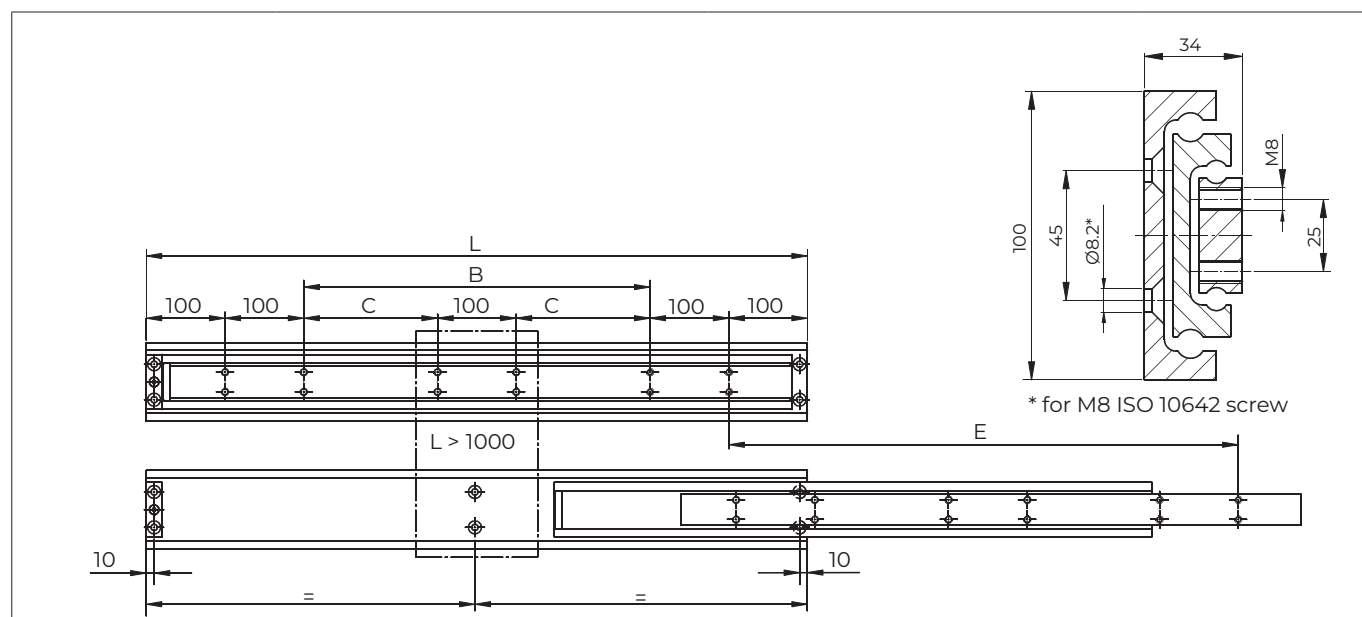
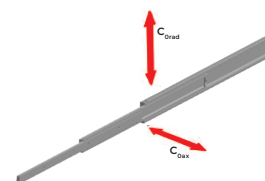
Tab. 14

MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

NTV100 - Full extension



Order Number	Hole Separation		Length	Extension	Load capacities for pair of rails		Weight per single guide
	B [mm]	C [mm]	L [mm]	E [mm]	EC _{rad} [N]	C _{ax} [N]	[kg]
NTV100-600	200		600	600	5750	2875	11.2
NTV100-650	250		650	650	5650	2825	12.2
NTV100-700	300		700	700	5550	2775	13.1
NTV100-750	350		750	750	5450	2725	14.0
NTV100-800	400		800	800	5350	2675	15.0
NTV100-850	450		850	850	5250	2625	15.9
NTV100-900	500		900	900	5150	2575	16.8
NTV100-950	550		950	950	5050	2525	17.8
NTV100-1000	600		1000	1000	4950	2475	18.7
NTV100-1100		300	1100	1100	4750	2375	20.6
NTV100-1200		350	1200	1200	4550	2275	22.5
NTV100-1300		400	1300	1300	4300	2150	24.3
NTV100-1400		450	1400	1400	4050	2025	26.2
NTV100-1500		500	1500	1500	3800	1900	28.1
NTV100-1600		550	1600	1600	3550	1775	29.9
NTV100-1700		600	1700	1700	3300	1650	31.8
NTV100-1800		650	1800	1800	3050	1525	33.7
NTV100-1900		700	1900	1900	2750	1375	35.6
NTV100-2000		750	2000	2000	2450	1225	37.4

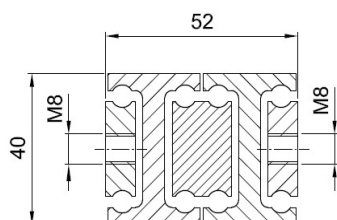
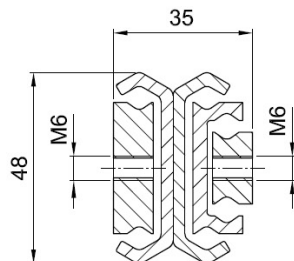
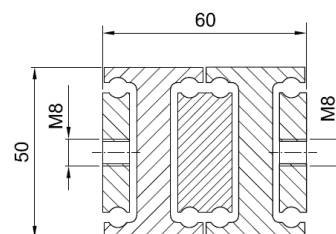
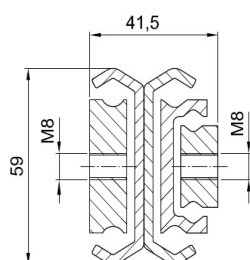
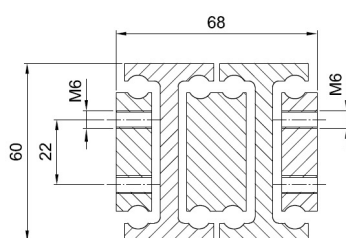
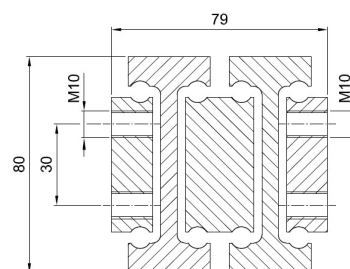
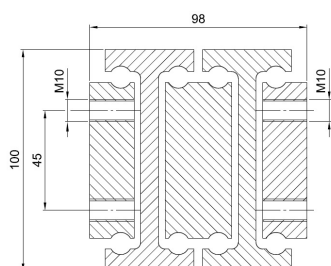
Tab. 15

MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

■ Over extension

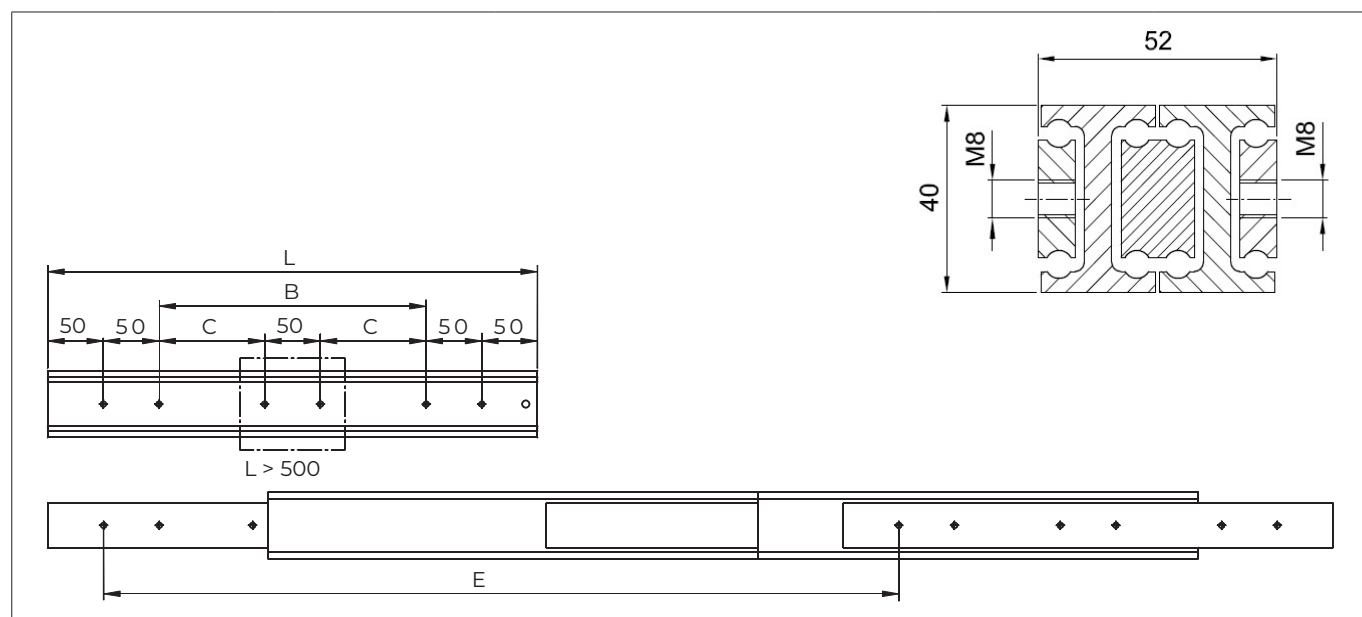
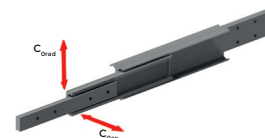
NTSU040*See page 27***NTU048***See page 28***NTSU050***See page 29***NTU059***See page 30***NTSU060***See page 31***NTSU080***See page 32***NTSU100***See page 33*

		Technical Manual				Material				Options											
Product group	Designation	L from	L to	Extension length	Load (N)	ST	NX2	NX4	A	VG	VO	VOG	EHG	EHO	EOG	EDG	NC4	FDOG	VR	VRM	
Over Extension	NTSU040	250	1200	~200%	- *	x	x	x	x								x				
	NTU048	250	1200	~150%	300-750	x										x	x				
	NTSU050	300	1500	~200%	- *	x	x	x	x								x				
	NTU059	300	1500	~150%	700-2000	x				x			x	x	x	x	x				
	NTSU060	500	1500	~200%	- *	x	x		x	x							x	x	x		
	NTSU080	500	1500	~200%	- *	x	x			x							x	x	x		
	NTSU100	650	1500	~200%	- *	x	x			x							x	x	x		

Legend	
ST	Standard steel with Zinc-Plating
NX2	AISI 304 profiles, cage and balls
NX4	AISI 316 profiles, cage and balls
A	Aluminium profiles, AISI 304 cage and balls
VG	guide locking in closed position with manual lever
VO	guide locking in open position with manual lever
VOG	guide locking in open and closed position with manual lever
EHG	forced opening and closing by spring pressure plungers
EHO	forced closure by spring pressure plungers
EOG	forced opening by spring plungers
EDG	rubber damper when retracted
NC4	zinc-nickel plating treatment on profiles - AISI 304 balls and cages
FDOG	spring damper when retracted
VR	extraction in both directions
VRM	synchronous extraction in both directions by means of a cam system
AZ	special extraction length NTT48-22T-1000-AZ1080 = Extension Length 1080 mm
VS1	reduced clearance – preload class VS1
VS2	reduced clearance – preload class VS2
LL	increased clearance for temperatures up to 200 °C
LS	increased clearance for temperatures > 200 °C

* on request, please contact our application engineering division

NTSU040 - Over extension



Order Number	Hole Separation		Length	Extension	Maximum Load/Pair	Net Weight
	B [mm]	C [mm]	L [mm]	E [mm]	[N]	[kg]
NTSU040-250	50		250	500	- *	2.0
NTSU040-300	100		300	600	- *	2.5
NTSU040-350	150		350	700	- *	2.9
NTSU040-400	200		400	800	- *	3.3
NTSU040-450	250		450	900	- *	3.7
NTSU040-500	300		500	1000	- *	4.1
NTSU040-550		150	550	1100	- *	4.5
NTSU040-600		175	600	1200	- *	4.9
NTSU040-650		200	650	1300	- *	5.3
NTSU040-700		225	700	1400	- *	5.7
NTSU040-750		250	750	1500	- *	6.1
NTSU040-800		275	800	1600	- *	6.5
NTSU040-850		300	850	1700	- *	7.0
NTSU040-900		325	900	1800	- *	7.4
NTSU040-950		350	950	1900	- *	7.8
NTSU040-1000		375	1000	2000	- *	8.2
NTSU040-1100		425	1100	2200	- *	9.0
NTSU040-1200		475	1200	2400	- *	9.8

Tab. 18

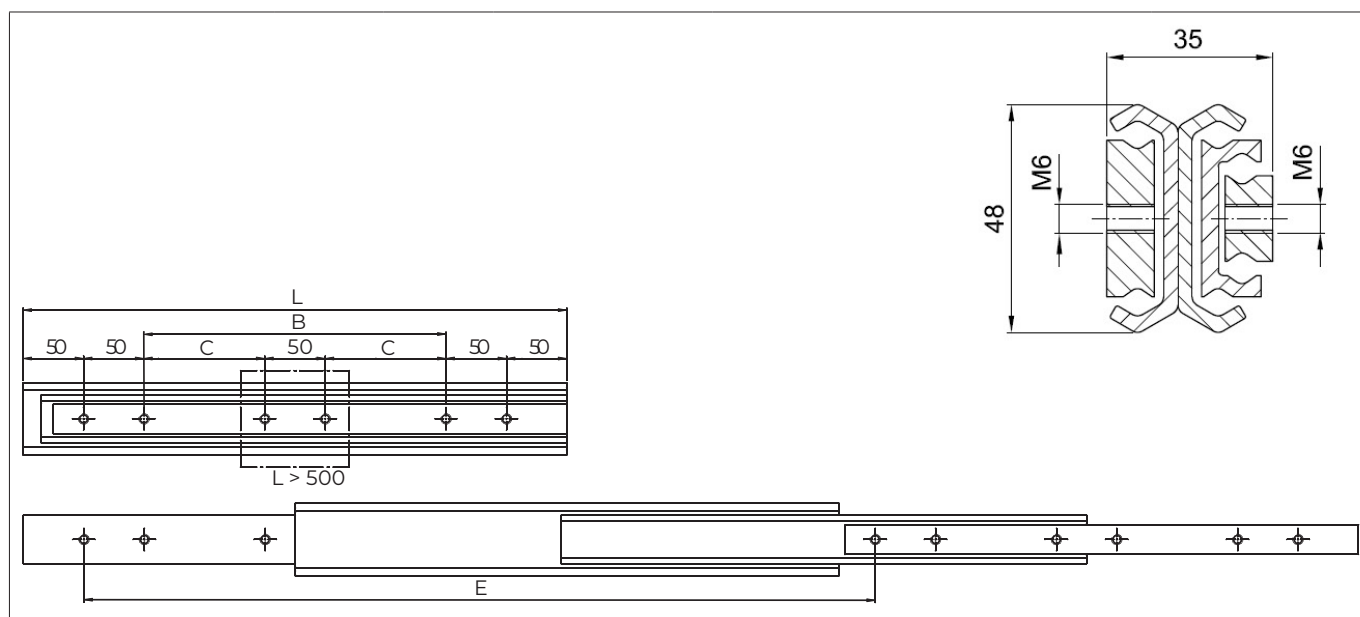
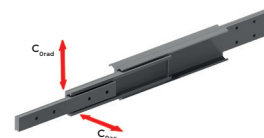
MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering

* on request, please contact our application engineering division

NTU048 - Over extension



Order Number	Hole Separation		Length	Extension	Maximum Load/Pair	Net Weight
	B [mm]	C [mm]	L [mm]	E [mm]	[N]	[kg]
NTU048-250	50		250	375	600	2.0
NTU048-300	100		300	450	650	2.5
NTU048-350	150		350	525	710	2.9
NTU048-400	200		400	600	750	3.3
NTU048-450	250		450	675	750	3.7
NTU048-500	300		500	750	750	4.1
NTU048-550		150	550	825	750	4.5
NTU048-600		175	600	900	710	4.9
NTU048-650		200	650	975	710	5.3
NTU048-700		225	700	1050	650	5.7
NTU048-750		250	750	1125	600	6.1
NTU048-800		275	800	1200	550	6.5
NTU048-850		300	850	1275	500	7.0
NTU048-900		325	900	1350	450	7.4
NTU048-950		350	950	1425	380	7.8
NTU048-1000		375	1000	1500	350	8.2
NTU048-1100		425	1100	1675	320	9.0
NTU048-1200		475	1200	1750	300	9.8

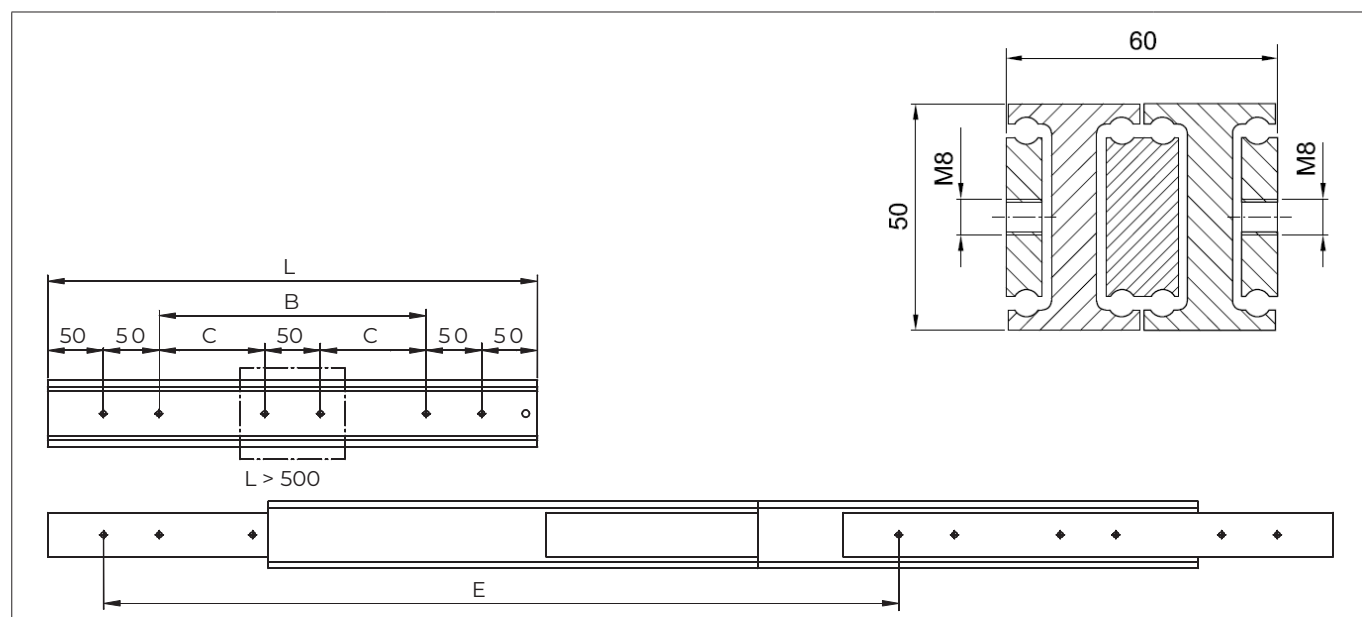
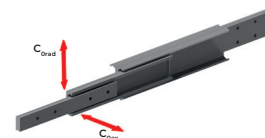
Tab. 19

MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

NTSU050 - Over extension



Order Number	Hole Separation		Length	Extension	Maximum Load/Pair	Net Weight
	B [mm]	C [mm]	L [mm]	E [mm]	[N]	[kg]
NTSU050-300	100		300	600	- *	3,3
NTSU050-350	150		350	700	- *	3,8
NTSU050-400	200		400	800	- *	4,4
NTSU050-450	250		450	900	- *	4,9
NTSU050-500	300		500	1000	- *	5,5
NTSU050-550		150	550	1100	- *	6,0
NTSU050-600		175	600	1200	- *	6,6
NTSU050-650		200	650	1300	- *	7,1
NTSU050-700		225	700	1400	- *	7,7
NTSU050-750		250	750	1500	- *	8,2
NTSU050-800		275	800	1600	- *	8,8
NTSU050-850		300	850	1700	- *	9,3
NTSU050-900		325	900	1800	- *	9,9
NTSU050-950		350	950	1900	- *	10,4
NTSU050-1000		375	1000	2000	- *	11,0
NTSU050-1100		425	1100	2200	- *	12,1
NTSU050-1200		475	1200	2400	- *	13,2
NTSU050-1300		525	1300	2600	- *	14,3
NTSU050-1400		575	1400	2800	- *	15,4
NTSU050-1500		625	1500	3000	- *	16,5

Tab. 20

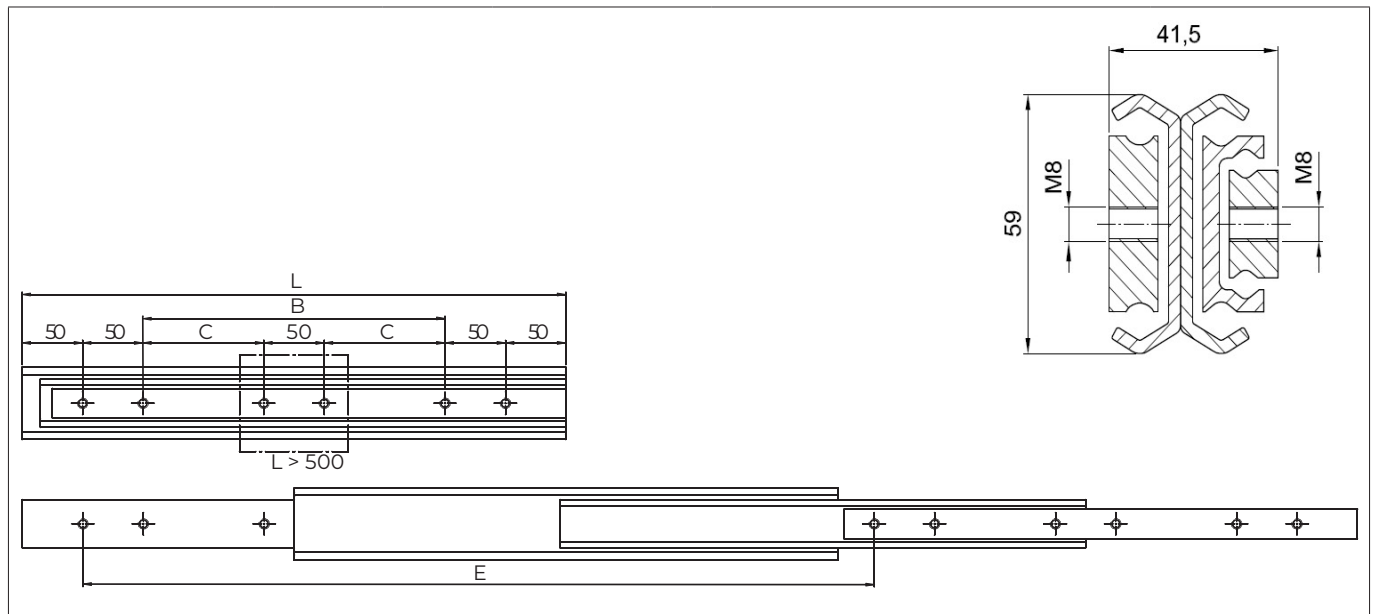
MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

* on request, please contact our application engineering division

NTU059 - Over extension



Order Number	Hole Separation		Length	Extension	Maximum Load/Pair	Net Weight
	B [mm]	C [mm]	L [mm]	E [mm]	[N]	[kg]
NTU059-300	100		300	450	1800	3.3
NTU059-350	150		350	525	1900	3.8
NTU059-400	200		400	600	1950	4.4
NTU059-450	250		450	675	2000	4.9
NTU059-500	300		500	750	2000	5.5
NTU059-550		150	550	825	1950	6.0
NTU059-600		175	600	900	1900	6.6
NTU059-650		200	650	975	1850	7.1
NTU059-700		225	700	1050	1800	7.7
NTU059-750		250	750	1125	1750	8.2
NTU059-800		275	800	1200	1700	8.8
NTU059-850		300	850	1275	1630	9.3
NTU059-900		325	900	1350	1560	9.9
NTU059-950		350	950	1425	1490	10.4
NTU059-1000		375	1000	1500	1420	11.0
NTU059-1100		425	1100	1650	1290	12.1
NTU059-1200		475	1200	1800	1160	13.2
NTU059-1300		525	1300	1950	1020	14.3
NTU059-1400		575	1400	2100	860	15.4
NTU059-1500			1500	2250	700	16.5

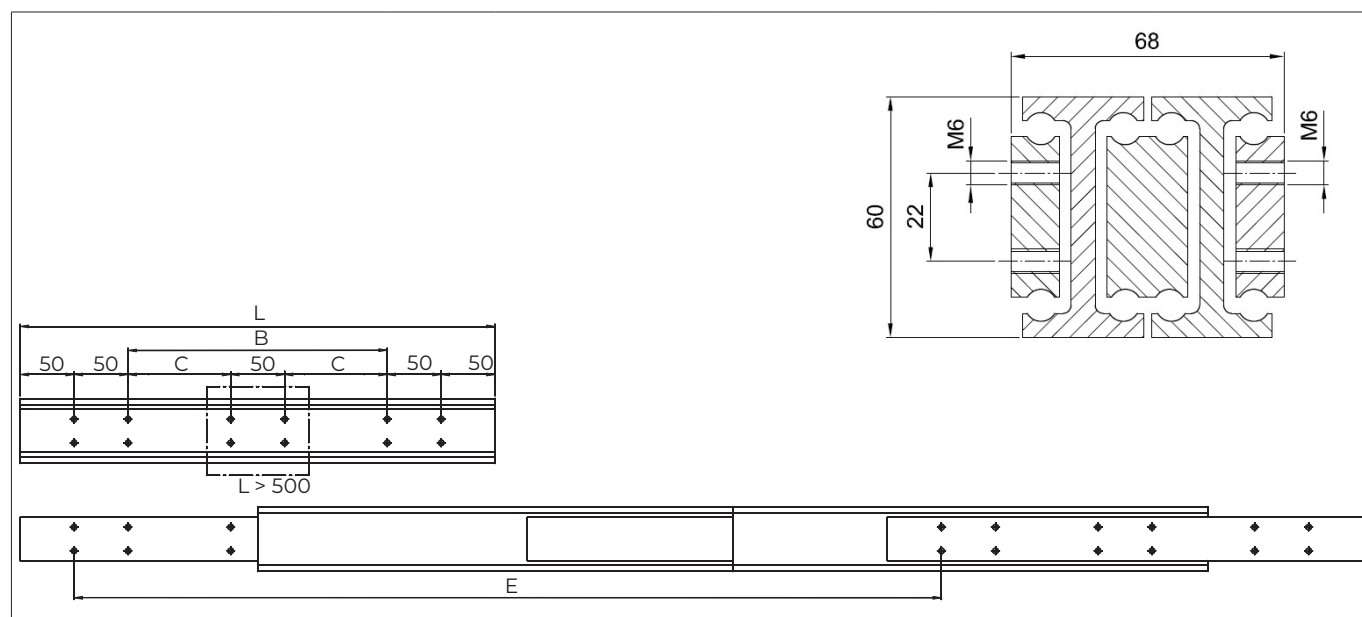
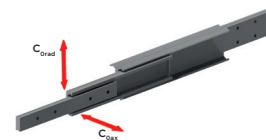
Tab. 21

MATERIAL: Zinc-plated steel

ON REQUEST: AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

NTSU060 - Over extension



Order Number	Hole Separation		Length	Extension	Maximum Load/Pair	Net Weight
	B [mm]	C [mm]	L [mm]	E [mm]	[N]	[kg]
NTSU060-500	300		500	1000	- *	11.5
NTSU060-550		150	550	1100	- *	12.6
NTSU060-600		175	600	1200	- *	13.8
NTSU060-650		200	650	1300	- *	14.9
NTSU060-700		225	700	1400	- *	16.0
NTSU060-750		250	750	1500	- *	17.1
NTSU060-800		275	800	1600	- *	18.2
NTSU060-850		300	850	1700	- *	19.4
NTSU060-900		325	900	1800	- *	20.5
NTSU060-950		350	950	1900	- *	21.7
NTSU060-1000		375	1000	2000	- *	22.8
NTSU060-1100		425	1100	2200	- *	25.0
NTSU060-1200		475	1200	2400	- *	27.3
NTSU060-1300		525	1300	2600	- *	29.6
NTSU060-1400		576	1400	2800	- *	31.8
NTSU060-1500		625	1500	3000	- *	34.1

Tab. 22

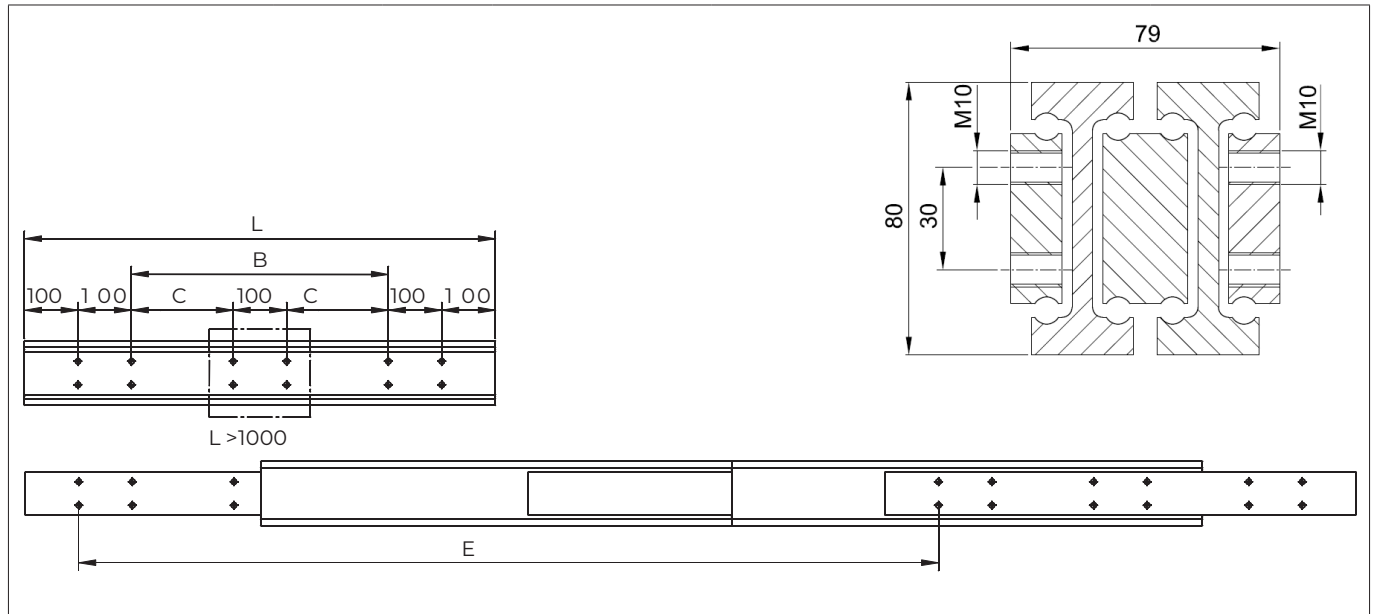
MATERIAL: Zinc-plated steel

ON REQUEST: Aluminum, AISI 304 or 316 stainless steel contact our application engineering division.

For options or special request, please contact our application engineering division

* on request, please contact our application engineering division

NTSU080 - Over extension



Order Number	Hole Separation		Length	Extension	Maximum Load/Pair	Net Weight
	B [mm]	C [mm]	L [mm]	E [mm]	[N]	[kg]
NTSU080-500	100		500	1000	- *	17.6
NTSU080-550	150		550	1100	- *	19.3
NTSU080-600	200		600	1200	- *	21.1
NTSU080-650	250		650	1300	- *	22.8
NTSU080-700	300		700	1400	- *	24.8
NTSU080-750	350		750	1500	- *	26.3
NTSU080-800	400		800	1600	- *	28.0
NTSU080-850	450		850	1700	- *	29.8
NTSU080-900	500		900	1800	- *	31.5
NTSU080-950	550		950	1900	- *	33.3
NTSU080-1000	600		1000	2000	- *	35.0
NTSU080-1100		300	1100	2200	- *	38.5
NTSU080-1200		350	1200	2400	- *	42.0
NTSU080-1300		400	1300	2600	- *	45.4
NTSU080-1400		450	1400	2800	- *	48.9
NTSU080-1500		500	1500	3000	- *	52.4

Tab. 23

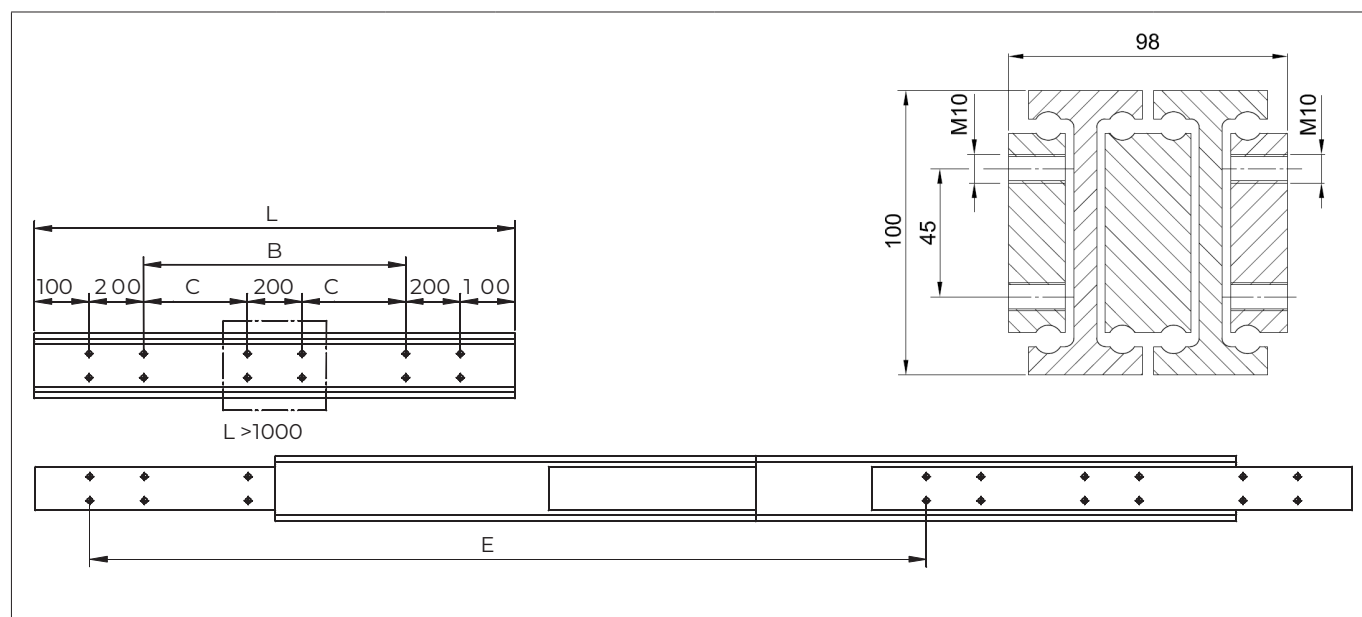
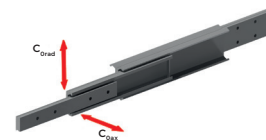
MATERIAL: Zinc-plated steel

ON REQUEST: AISI 304 or 316 stainless steel

For options or special request, please contact our application engineering division

* on request, please contact our application engineering division

NTSU100 - Over extension



Order Number	Hole Separation		Length	Extension	Maximum Load/Pair	Net Weight
	B [mm]	C [mm]	L [mm]	E [mm]	[N]	[kg]
NTSU100-650	50		650	1300	- *	39.1
NTSU100-700	100		700	1400	- *	42.1
NTSU100-750	150		750	1500	- *	45.1
NTSU100-800	200		800	1600	- *	48.2
NTSU100-850	250		850	1700	- *	51.2
NTSU100-900	300		900	1800	- *	54.2
NTSU100-950	350		950	1900	- *	57.2
NTSU100-1000	400		1000	2000	- *	60.2
NTSU100-1100		150	1100	2200	- *	66.2
NTSU100-1200		200	1200	2400	- *	72.2
NTSU100-1300		250	1300	2600	- *	78.3
NTSU100-1400		300	1400	2800	- *	84.3
NTSU100-1500		350	1500	3000	- *	90.3

Tab. 24

MATERIAL: Zinc-plated steel

ON REQUEST: AISI 304 or 316 stainless steel

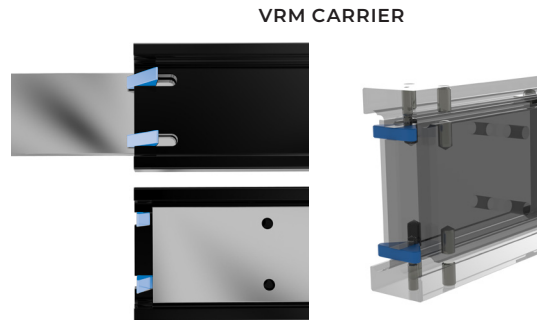
For options or special request, please contact our application engineering division

* on request, please contact our application engineering division

► ACCESSORIES

■ Forward and Backward Extension (VR, VRM)

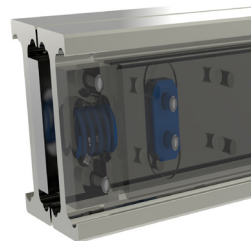
Several telescopic rails of the full extensions range can be delivered with extraction in both directions (VR). The intermediate member can be controlled as synchronous extraction by means of cams (VRM). The advantage is a higher security because the unintentional moving of the middle element can be prevented. The loads at the end of a telescopic slide can be better supported with an optimum distribution.



■ End Stops and Dampers (EDG, FDOG)

End stops are standardized equipment for all telescopic slides. Furthermore special dampers can be provided for numerous extensions. There is the possibility to choose between simple cheap plastic or elastomer dampers – fixed directly at the end – or special spring dampers.

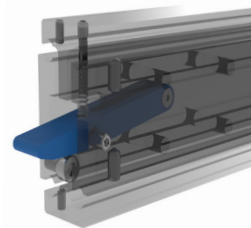
FDOG DAMPER



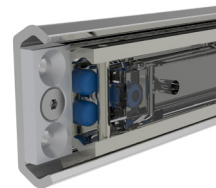
■ Catches (EHG, EHO, EOG) or Lockings (VO, VG, VOG)

Lockings are non-positive fixings by means of spring pressure pieces, which can be integrated in many telescopic guides for the closed position, the extended end position or for both end positions. This effectively prevents the drawers from opening and closing independently. With some telescopic pull-outs, brackets in intermediate positions are also possible. Locks are form-fitting locks that fix the pullouts in the respective end positions using locking bolts or snap locks. Unintentional extension or retraction is not possible without mechanical unlocking, even with effort. This variant can be implemented for the inner, outer or both end positions and thus offers good protection for people and material in special applications.

LOCKING



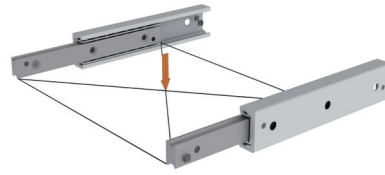
CATCHES



► USE AND MAINTENANCE

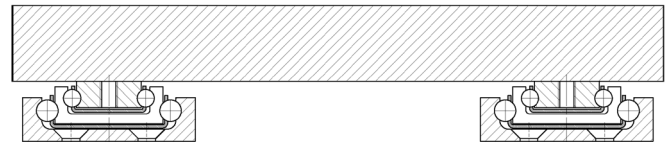
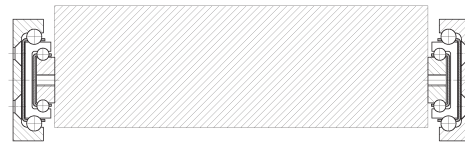
■ General Basic Conditions:

- ▣ Pair wise operation
- ▣ Cross section in vertical position
- ▣ Center of gravity of load in the middle between telescopic slide pairs
- ▣ Center of gravity of load in the middle of the rail drawers
- ▣ Permissible loads can only be reached when using all standard fixing points



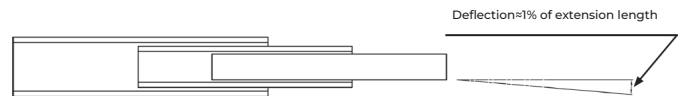
■ Standard application: Drawer extension telescopic rails vertical.

With flat mounting of the telescopic rails up to 50 % of the allowed loads can be used depending on the type of rail. Besides the deflection will be significantly higher. Therefore a horizontally installation is recommended for a limited extend only when using small rails or extensions less than 600 mm. If this is the case, please contact Nadella's technical service for additional information.



■ Spring deflection

spring deflection means the deflection of the full telescopic guide under maximum load. Telescopic rails which are correctly installed and with equally divided load between the extension pairs only have a very low deflection because of their rigid body. The standard telescopic rails have a spring deflection of approx. 1 % with the maximum use of the load, pair wise use and radial load (vertically mounted). Spring Deflection for very long telescopic guides is higher than 1%. For any application with tangential load or horizontal installations, please contact Nadella's technical service.



■ Dynamic and Lifetime

Telescopic rails are mainly aimed for static applications. The recommended operating speed is lower than 0.5 m/s. Continuous operation or more than 10 strokes/min will negatively influence the lifetime. If higher dynamics are required you should use a bigger oversized guide rail. You have also the possibility to use telescopic rails with hardened raceways. The standard operating temperature is between +10°C and +80°C, but depending on the application, the temperature range can be higher up to 300°C. In this case, adaptations must be made regards bearing air and eventually surface coating and special high temperature lubricants are necessary.

■ Installation of Telescopic Rails

The telescopic rails with nearly zero play must be mounted parallel and angled for a perfect operating behaviour. All fixing holes and/or threads should be used for an optimum use of load.

Telescopic rails must be mounted by using screws with a class 8.8 for assembly and to be fixed according to the screw producer's guidelines. Under certain circumstances the guide rails can be equipped with increased bearing air and can be mounted with a slight stroke.

■ Maintenance and Lubrication

Standard rails are delivered fully assembled and greased. Rails made of stainless steel or aluminium will be delivered ungreased. Depending on the surrounding conditions they should be checked from time to time, dirt should be removed and "dry" rails should be regreased. This prevents friction, protects the assembly parts and provides a long life. The regreasing term is variable and should be calculated regards use conditions such as load, travel conditions, temperature, dirt etc.. The ball cages of the telescopic slides are not restraint-guided, consequently the cage can move. In this case the end positions have to be reset.



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