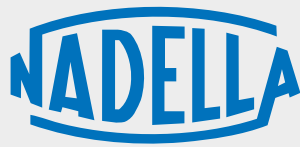


THE SPECIALIST
FOR MOTION
TECHNOLOGY

TELESCOPIC LINE

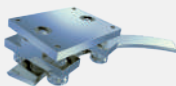




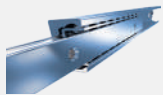
Nadella is an expert system partner for all areas of **motion technology**, with specialized manufacturer companies and a worldwide sales network.

Wherever innovative ideas, customized solutions, precision and reliability are required, developers and design engineers rely on our products and solutions.

BRANDS AND PRODUCTS OVERVIEW



Linear Guides



Telescopic Rails



Linear Modules



Linear Axes and Systems



Circular Systems



Bearings and Cam Followers



Adjusting Nuts & Rings



Rod Ends and Spherical Plain Bearings



Clevises and Ball/Axial Joints



Precision Ball Screws



Rolled Ball Screws

MILESTONES

1930

NADELLA foundation in France

1958

Founding of NADELLA GMBH in Germany

1963

Founding of NADELLA S.P.A. in Italy

1984

Start of development and sale of Nadella Linear

2012

New Nadella subsidiaries in China and USA

2014

Acquisition of DURBAL

2018

Acquisition of CHIAVETTE UNIFICATE

2019

Founding of Nadella Motion Technology

2020

New Nadella subsidiaries in France and Spain
Acquisition of SHUTON and IPIRANGA

2021

Acquisition of DAMO

2022

Orchestra enters in Nadella Group

2023

Timken acquires Nadella Group

KEY NUMBERS

8 manufacturing plants

14 main locations

Italy, Germany, France, United Kingdom, Spain, United States, China

leading the way in the international markets

in over **60** countries

for more than **90** years

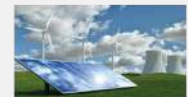
APPLICATION SECTORS



AUTOMATION AND ROBOTICS



AUTOMOTIVE



ENERGY



FOOD & BEVERAGE



MACHINE TOOL



MEDICAL TECHNOLOGY



METAL WORKING



PACKAGING



POWER TRANSMISSION



SPECIAL MACHINERY



TRANSPORTATION



WAREHOUSE AND LOGISTICS

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HARDENED TELESCOPIC RAILS

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HT 2.0 FULL EXTENSION

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HT 3.0 OVER EXTENSION

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HT 4.0 LINEAR GUIDES

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HT 5.0 GENERAL INFORMATION

- TECHNICAL SPECIFICATIONS
- APPLICATIONS
- ORDER CODE

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TELESCOPIC RAILS

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TL 1.0 PARTIAL EXTENSION

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TL 2.0 FULL EXTENSION

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TL 3.0 HEAVY DUTY EXTENSION

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TL 4.0 OVER EXTENSION

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TL 5.0 GENERAL INFORMATION

- TECHNICAL SPECIFICATIONS
- APPLICATIONS
- ORDER CODE



HARDENED TELESCOPIC RAILS PARTIAL EXTENSION

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HT 1.1 PRODUCT OVERVIEW

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HT 1.2 PARTIAL EXTENSION

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- NTA43-22H

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- NTA63-29H



PRODUCT OVERVIEW

HARDENED TELESCOPIC LINE

The Hardened Telescopic Line of Nadella is the ideal solution for those applications requiring high duty cycles, heavy loads and continuous processes. Made entirely of steel, with cold drawn profiles and induction hardened raceways, it enables you to move heavy loads with a smooth rolling and reduced clearance thanks to the new optimized shape.

Each product is composed of:

- Linear guide made of cold drawn steel, to ensure a high load capacity and low deflection.
- Internal raceways produced with the new engineered shape to reduce friction and clearance, induction hardened for a high wear resistance and durability.
- New designed ball-cage made of steel, to allow a smoother sliding of the elements, controlled clearance and very high load capacity.

The hardened telescopic line includes:

PARTIAL EXTENSION

- Partial EXTENSION telescopic rails NTA-H, with a stroke equal to 50%-70% of the installation length.



FULL EXTENSION

- Full Extension telescopic rails NTS-H, with a stroke equal to 100% of the installation length.



-Full extension telescopic rails NTVZ-S (single) with a stroke equal to 100% of the installation length

-Full extension telescopic rails NTVZ-D (double) with a stroke equal to 100% of the installation length on both directions.



OVER EXTENSION

- Over extension telescopic rails NTUZ with a stroke bigger than 100% of the installation length.



LINEAR GUIDES

- NTSF Linear guides rails, with one or more sliders running inside a fixed length.



Nadella telescopic rails can be supplied in standard length and holes pitch as per our catalogue specifications or in several different configurations according to customer needs.

See technical specifications for more information regarding available solutions and options.

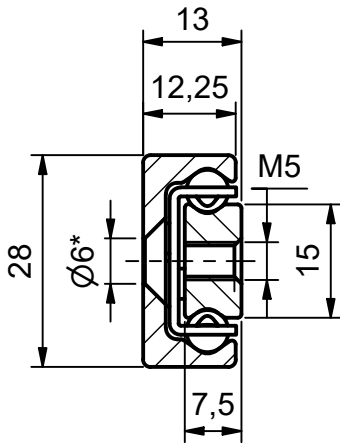
PRODUCT OVERVIEW

PARTIAL EXTENSION NTA-H

HT1.1

NTA28-13H

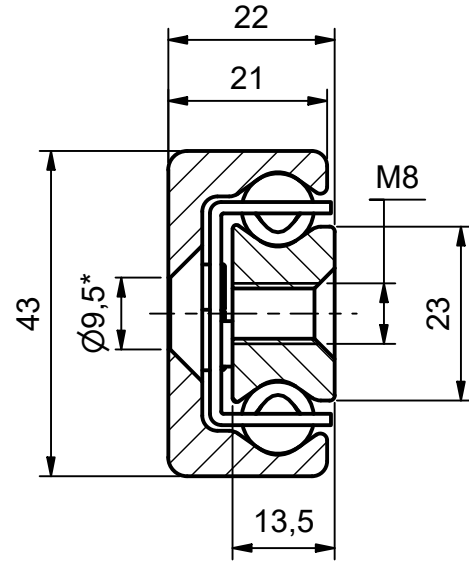
See page 9



* for M5 ISO 10642 screw

NTA43-22H

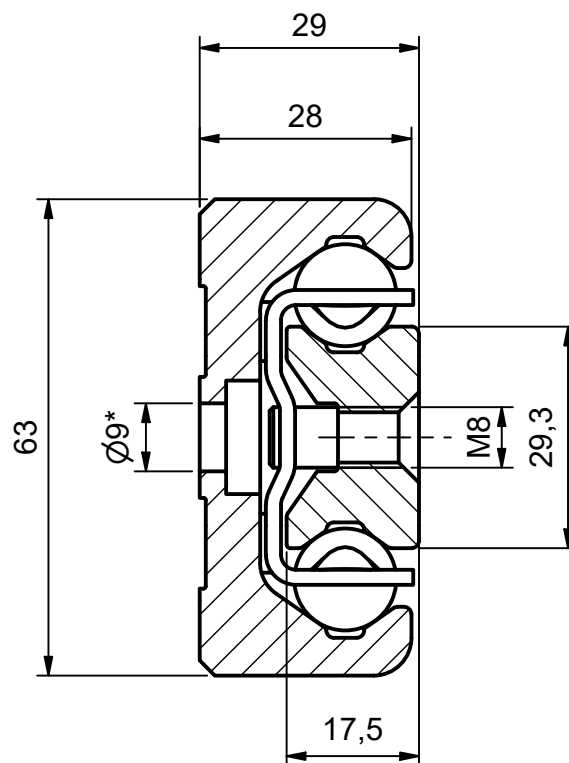
See page 10



* for M8 ISO 10642 screw

NTA63-29H

See page 11



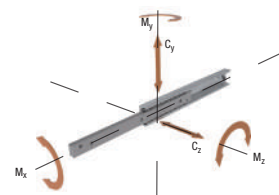
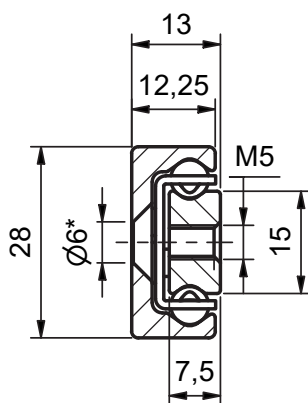
* for M8 ISO 4762 screw

PARTIAL EXTENSION

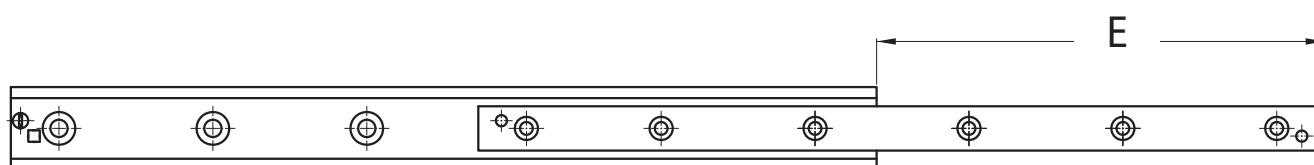
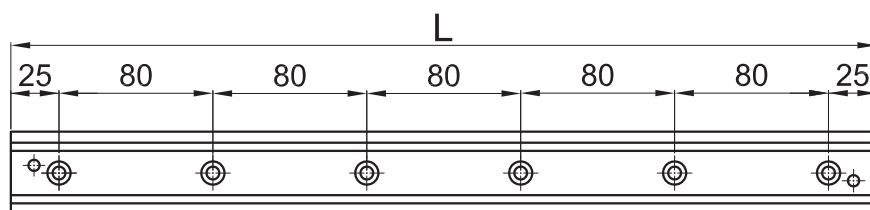
NTA28-13H

MATERIAL
Zinc-plated steel

L_{min}130 **L_{max}1170**



* for M5 ISO 10642 screw



Order Number	Length	Extension	Cy ¹⁾	Cz ¹⁾	Mx ³⁾	My ¹⁾	Mz ¹⁾	Cdyn ^{1) 2)}	Net Weight
	[mm]		[N]	[N]	[Nm]	[N]	[N]		
NTA28-13H-130	130	73	1452	1013	15	41	58	4226	0.28
NTA28-13H-210	210	113	2604	1829	27	122	173	6459	0.45
NTA28-13H-290	290	153	3756	2633	39	245	350	8366	0.62
NTA28-13H-370	370	193	4903	3446	52	413	586	10069	0.80
NTA28-13H-450	450	233	6055	4250	64	622	876	11650	0.97
NTA28-13H-530	530	273	7164	5047	76	874	1214	13051	1.14
NTA28-13H-610	610	323	8016	5640	85	1087	1500	13935	1.31
NTA28-13H-690	690	363	9036	6432	97	1402	1886	15076	1.49
NTA28-13H-770	770	403	10032	7200	109	1745	2287	16137	1.66
NTA28-13H-850	850	433	11232	8155	124	2220	2748	17481	1.84
NTA28-13H-930	930	473	11976	8976	137	2585	3086	18089	2.01
NTA28-13H-1010	1010	523	12569	9470	146	2890	3300	18469	2.18
NTA28-13H-1090	1090	263	13138	10159	158	3276	3514	18820	2.36
NTA28-13H-1170	1170	603	13589	10831	170	3667	3694	19013	2.53

1) Cy, Cz, My, Mz and Cdyn= load and torque capacities for pair of rails

2) Cdyn is used for lifetime calculation

3) Mx = torque capacity for single rail

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- **Double stroke (option VR):** In order to obtain the double stroke and allow the slider to extend in both directions, please remove the screws at the edge of the rail or order with VR suffix.

PARTIAL EXTENSION

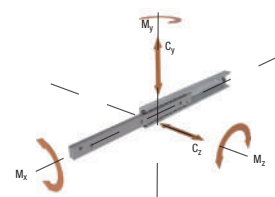
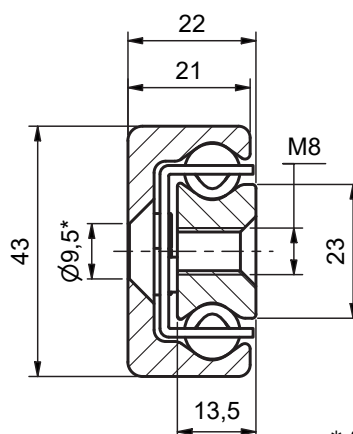
NTA43-22H

HT1.2

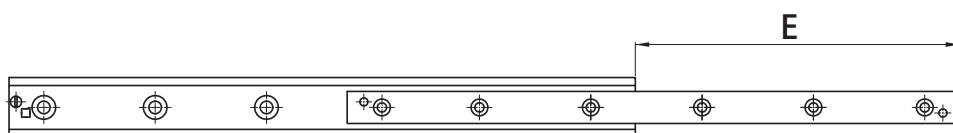
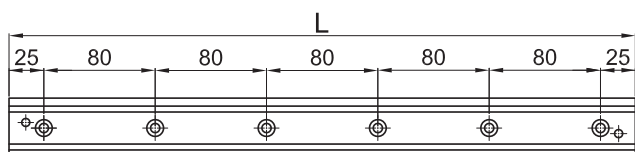
MATERIAL

Zinc-plated steel

Lmin210 **Lmax1970**



* for M8 ISO 10642 screw



Order Number	Length	Extension	Cy ¹⁾	Cz ¹⁾	Mx ³⁾	My ¹⁾	Mz ¹⁾	Cdyn ^{1) 2)}	Net Weight
	[mm]								
NTA43-22H-210	210	123	5460	3031	66	182	262	11447	1.10
NTA43-22H-290	290	158	6917	4850	106	437	624	16278	1.53
NTA43-22H-370	370	208	8657	6062	132	667	950	18784	1.95
NTA43-22H-450	450	243	11208	7879	172	1102	1565	22783	2.39
NTA43-22H-530	530	278	13673	9689	211	1644	2311	26318	2.82
NTA43-22H-610	610	313	16073	11503	251	2282	3168	29522	3.26
NTA43-22H-690	690	363	17856	12665	277	2758	3773	31477	3.67
NTA43-22H-770	770	398	20124	14458	317	3545	4704	34201	4.11
NTA43-22H-850	850	433	22308	16166	357	4397	5609	36684	4.54
NTA43-22H-930	930	483	23604	17309	383	4992	6163	37669	4.96
NTA43-22H-1010	1010	518	25277	18696	423	5899	6898	39244	5.40
NTA43-22H-1090	1090	568	26345	20014	449	6523	7303	39876	5.82
NTA43-22H-1170	1170	603	27576	21504	489	7416	7778	40766	6.25
NTA43-22H-1250	1250	638	28548	22961	529	8270	8122	41282	6.68
NTA43-22H-1330	1330	688	29102	23770	555	8786	8282	41223	7.10
NTA43-22H-1410	1410	723	29652	25015	595	9492	8431	41191	7.54
NTA43-22H-1490	1490	758	30029	26064	634	10094	8532	40954	7.97
NTA43-22H-1570	1570	793	30240	27053	674	10608	8556	40530	8.41
NTA43-22H-1650	1650	843	30420	27559	700	10884	8563	40101	8.82
NTA43-22H-1730	1730	878	30470	28224	740	11222	8568	39539	9.26
NTA43-22H-1810	1810	928	30509	28649	766	11398	8570	38996	9.68
NTA43-22H-1890	1890	963	30610	29150	806	11669	8573	38565	10.11
NTA43-22H-1970	1970	1013	30617	29383	832	11688	8573	38045	10.53

1) Cy, Cz, My, Mz and Cdyn= load and torque capacities for pair of rails

2) Cdyn is used for lifetime calculation

3) Mx = torque capacity for single rail

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- **Double stroke (option VR):** In order to obtain the double stroke and allow the slider to extend in both directions, please remove the screw at the edge of the rail or order with VR suffix.

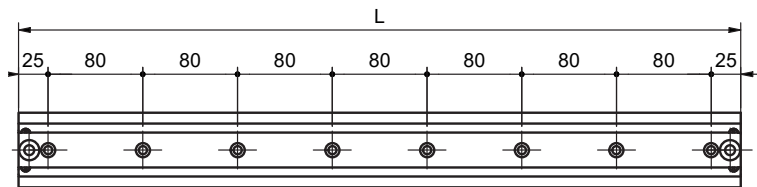
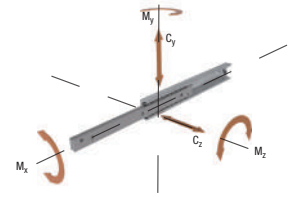
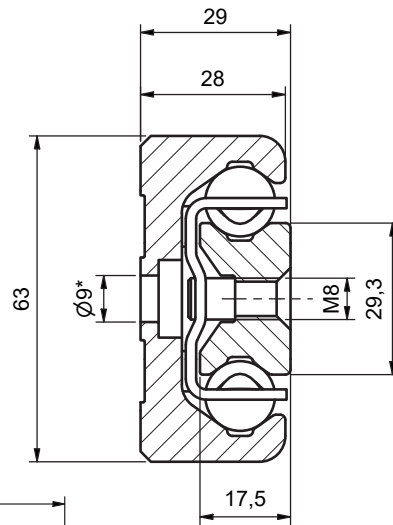
PARTIAL EXTENSION

NTA63-29H

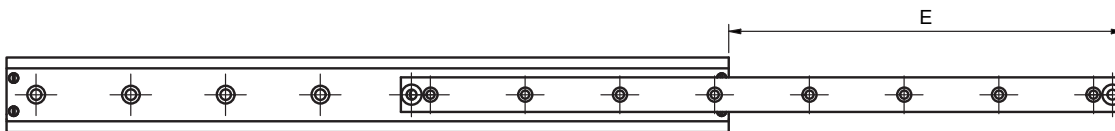
MATERIAL
Zinc-plated steel

NC4 VR

L_{min}610 L_{max}1970



* for M8 ISO 4762 screw



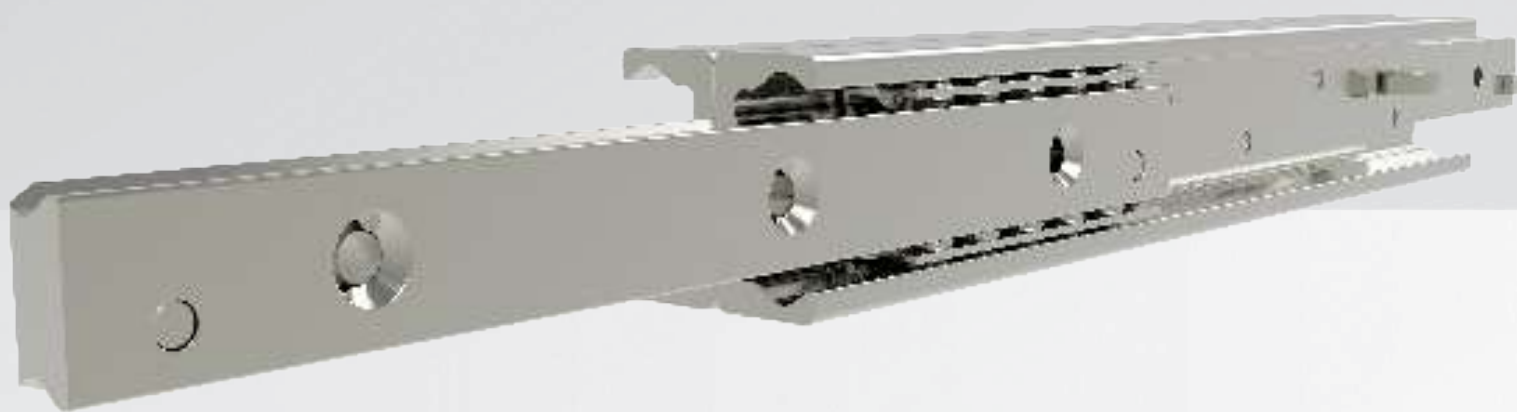
Order Number	Length	Extension	Cy ¹⁾	Cz ¹⁾	Mx ³⁾	My ¹⁾	Mz ¹⁾	Cdyn ^{1) 2)}	Net Weight
	[mm]								
NTA63-29H-610	610	333	21648	15180	496	2952	4217	23522	5,99
NTA63-29H-690	690	373	25116	17623	573	3888	5544	26192	6,78
NTA63-29H-770	770	413	28560	20033	649	4966	7049	28714	7,56
NTA63-29H-850	850	453	32081	22478	725	6149	8724	31209	8,35
NTA63-29H-930	930	493	35386	24898	802	7488	10548	33407	9,13
NTA63-29H-1010	1010	533	38743	27288	878	8921	12514	35585	9,92
NTA63-29H-1090	1090	573	42067	29707	954	10466	14578	37668	10,70
NTA63-29H-1170	1170	613	45322	32083	1031	12144	16764	39635	11,49
NTA63-29H-1250	1250	653	48504	34474	1107	13920	19015	41494	12,27
NTA63-29H-1330	1330	693	51667	36893	1183	15802	21300	43295	13,06
NTA63-29H-1410	1410	733	54689	39242	1260	17774	23609	44943	13,85
NTA63-29H-1490	1490	773	57574	41520	1336	19800	25860	46452	14,63
NTA63-29H-1570	1570	813	60420	43855	1412	21929	28042	47906	15,42
NTA63-29H-1650	1650	853	63096	46145	1489	24156	30149	49205	16,20
NTA63-29H-1730	1730	893	65532	48403	1565	26362	32112	50305	16,99
NTA63-29H-1810	1810	933	67896	50525	1641	28589	33948	51340	17,77
NTA63-29H-1890	1890	973	70099	52661	1718	30850	35582	52247	18,56
NTA63-29H-1970	1970	1013	72000	54802	1794	33151	37049	52928	19,34

1) Cy, Cz, My, Mz and Cdyn= load and torque capacities for pair of rails

2) Cdyn is used for lifetime calculation

3) Mx = torque capacity for single rail

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- **Double stroke (option VR):** In order to obtain the double stroke and allow the slider to extend in both directions, please remove the screw at the edge of the rail or order with VR suffix.



FULL EXTENSION

HT2

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HT2.1 PRODUCT OVERVIEW

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HT2.2 PARTIAL EXTENSION

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- NTS28-26H

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- NTS28-26H..VRM

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- NTS43-44H

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- NTS43-44H..VRM

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- NTS63-58H

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- NTS63-58H..VRM

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- NTVZ84-17H..S

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- NTVZ84-17H..D

PAGE 25

- NTVZ120-28H..S

PAGE 26

- NTVZ120-28H..D

PAGE 27

- NTVZ208-40H..S

PAGE 28

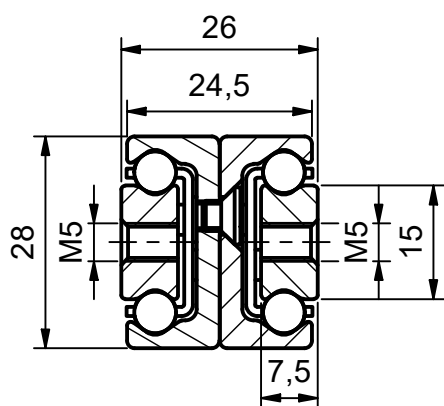
- NTVZ208-40H..D

PRODUCT OVERVIEW

FULL EXTENSION NTS-H

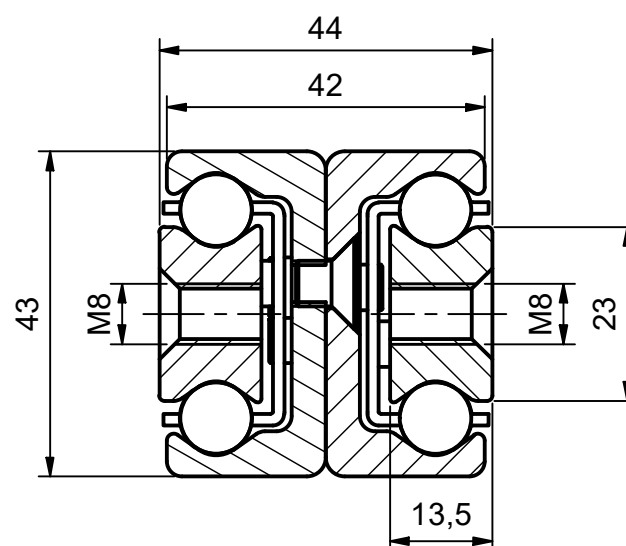
NTS28-26H

See page 17



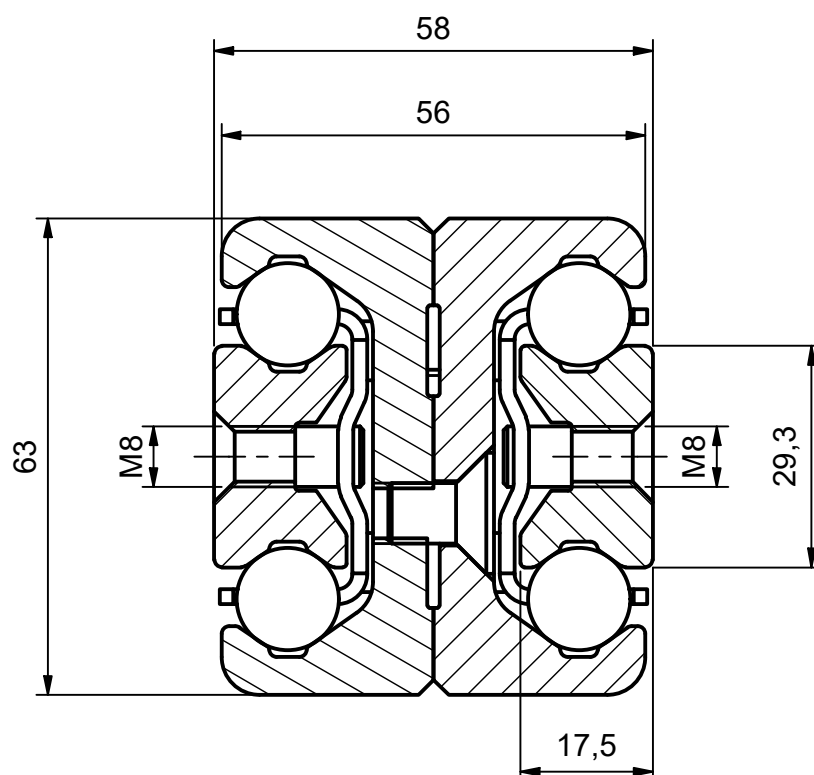
NTS43-44H

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NTS63-58H

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PRODUCT OVERVIEW

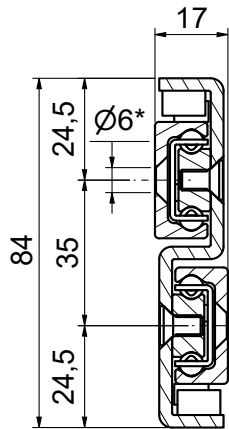
FULL EXTENSION NTVZ-H

HT2.1

NTVZ84-17H

(INCLUDES BOTH -S AND -D VERSIONS)

See page 23 for -S version

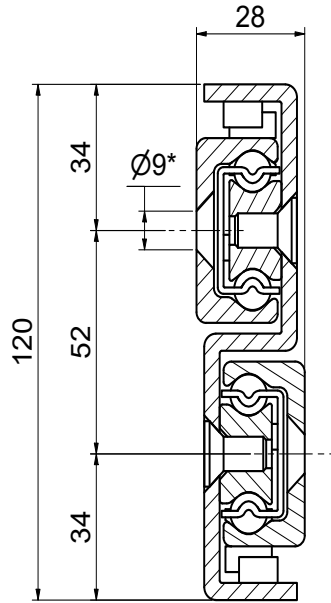


* for M5 ISO 10642 screw

NTVZ120-28H

(INCLUDES BOTH -S AND -D VERSIONS)

See page 25 for -S version

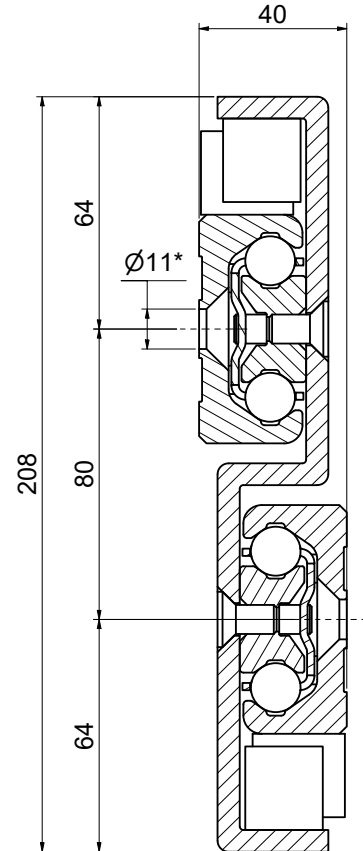


* for M8 ISO 10642 screw

NTVZ208-40H

(INCLUDES BOTH -S AND -D VERSIONS)

See page 27 for -S version



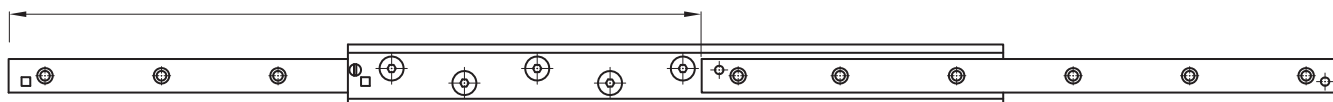
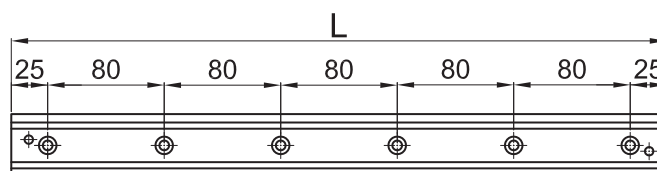
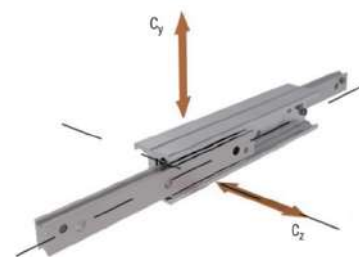
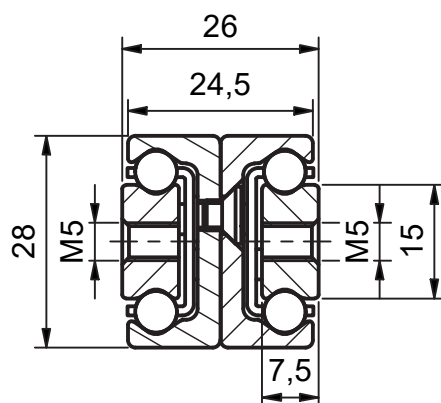
* for M10 ISO 10642 screw

FULL EXTENSION

NTS28-26H

MATERIAL
Zinc-plated steel

L_{min}130 **L_{max}1170**



Order Number	Length	Extension	C _y ¹⁾	C _z ¹⁾	C _{dyn} ^{1) 2)}	Net Weight
	[mm]		[N]			[kg]
NTS28-26H-130	130	147	536	354	1248	0.55
NTS28-26H-210	210	227	990	616	1786	0.90
NTS28-26H-290	290	307	1547	830	2447	1.25
NTS28-26H-370	370	387	1980	940	3098	1.60
NTS28-26H-450	450	467	2112	908	3940	1.94
NTS28-26H-530	530	547	1872	840	4263	2.29
NTS28-26H-610	610	647	1677	760	3975	2.63
NTS28-26H-690	690	727	1501	688	3756	2.98
NTS28-26H-770	770	797	1376	630	3320	3.32
NTS28-26H-850	850	867	1270	580	2966	3.68
NTS28-26H-930	930	947	1178	536	2668	4.02
NTS28-26H-1010	1010	1047	1101	502	2426	4.36
NTS28-26H-1090	1090	1127	1034	468	2221	4.71
NTS28-26H-1170	1170	1207	966	442	2028	5.06

1) C_y, C_z and C_{dyn} = load capacities for pair of rails

2) C_{dyn} is used for lifetime calculation

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- **Double stroke (option VR):** In order to obtain the double stroke and allow the slider to extend in both directions, please remove the screws at the edge of the rail or order with VR suffix.

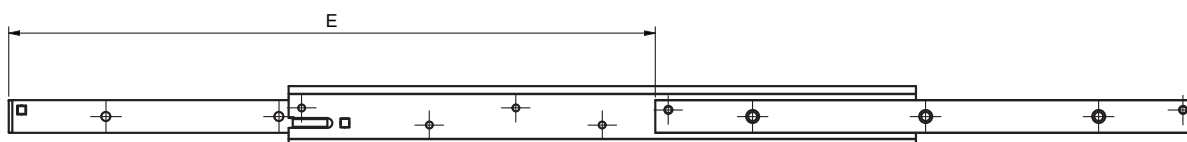
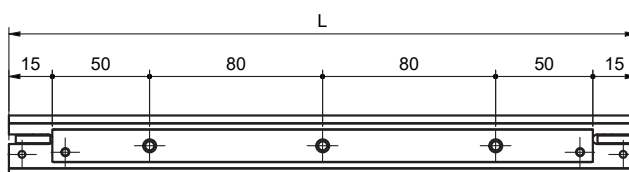
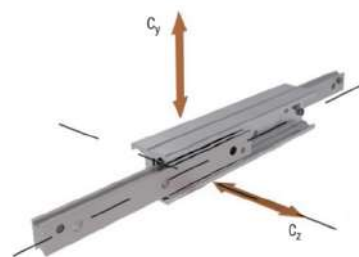
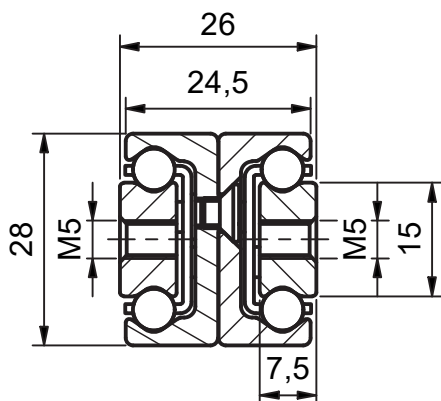
FULL EXTENSION

NTS28-26H..VRM

HT2.2

MATERIAL
Zinc-plated steel

L_{min}290 **L_{max}1170**



Order Number	Length	Extension	C _y ¹⁾	C _z ¹⁾	C _{dyn} ^{1) 2)w}	Net Weight
	[mm]		[N]			[kg]
NTS28-26H-290-VRM	290	299	882	473	2447	1,11
NTS28-26H-370-VRM	370	379	1327	630	3098	1,42
NTS28-26H-450-VRM	450	479	1732	745	3940	1,72
NTS28-26H-530-VRM	530	559	1891	848	4263	2,03
NTS28-26H-610-VRM	610	639	1710	775	3975	2,34
NTS28-26H-690-VRM	690	719	1486	681	3756	2,64
NTS28-26H-770-VRM	770	799	1348	617	3320	2,95
NTS28-26H-850-VRM	850	899	1283	586	2966	3,26
NTS28-26H-930-VRM	930	979	1154	525	2668	3,56
NTS28-26H-1010-VRM	1010	1059	1079	492	2426	3,87
NTS28-26H-1090-VRM	1090	1139	1044	473	2221	4,18
NTS28-26H-1170-VRM	1170	1219	957	438	2028	4,48

1) C_y, C_z and C_{dyn} = load capacities for pair of rails

2) C_{dyn} is used for lifetime calculation

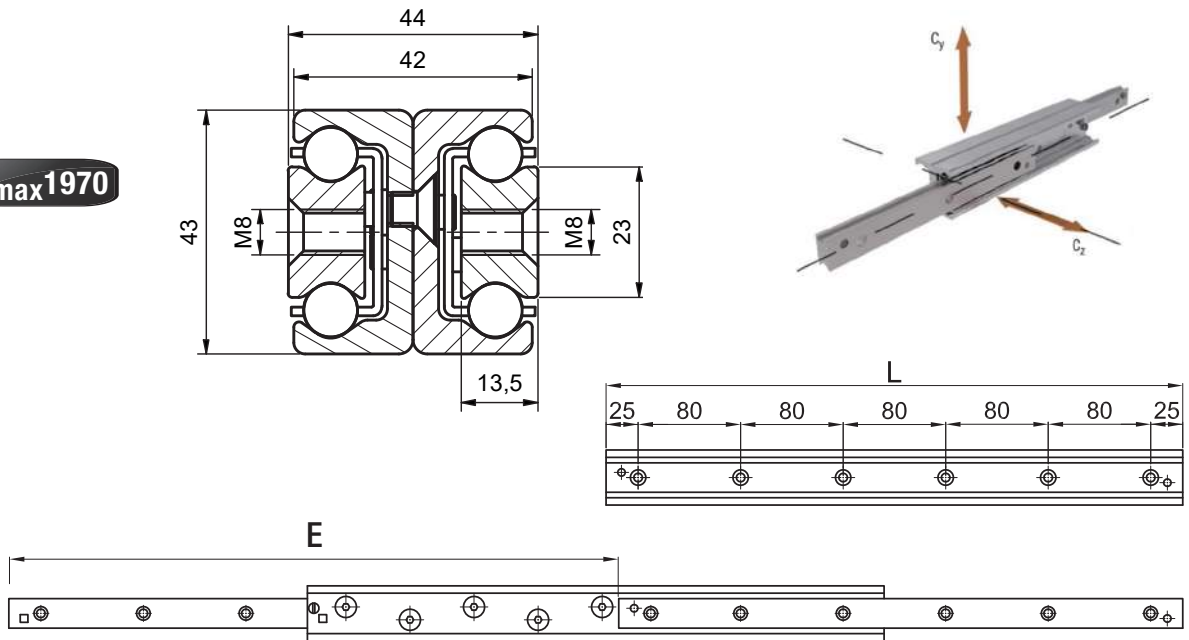
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- **VRM option** allows the slider to extend in both directions in a synchronized way.

FULL EXTENSION

NTS43-44H

MATERIAL
Zinc-plated steel

L_{min}210 **L_{max}1970**



Order Number	Length	Extension	C _y ¹⁾	C _z ¹⁾	C _{dyn} ¹⁾²⁾	Net Weight
	[mm]					
NTS43-44H-210	210	246	1438	1008	814	2.20
NTS43-44H-290	290	316	2440	1630	1181	3.07
NTS43-44H-370	370	416	3238	1912	2286	3.90
NTS43-44H-450	450	486	4234	2366	2582	4.77
NTS43-44H-530	530	556	5107	2612	4068	5.64
NTS43-44H-610	610	626	5796	2644	4600	6.51
NTS43-44H-690	690	726	5724	2508	5684	7.35
NTS43-44H-770	770	796	5022	2362	8102	8.22
NTS43-44H-850	850	866	4658	2200	8759	9.10
NTS43-44H-930	930	966	4335	2052	12917	9.92
NTS43-44H-1010	1010	1036	4066	1920	15063	10.80
NTS43-44H-1090	1090	1106	3822	1804	14883	11.63
NTS43-44H-1170	1170	1206	3604	1708	11753	12.50
NTS43-44H-1250	1250	1276	3400	1616	11731	13.37
NTS43-44H-1330	1330	1376	3233	1536	10927	14.20
NTS43-44H-1410	1410	1446	3067	1460	10165	15.07
NTS43-44H-1490	1490	1516	2927	1394	9526	15.90
NTS43-44H-1570	1570	1586	2798	1336	8948	16.81
NTS43-44H-1650	1650	1686	2676	1276	8416	17.65
NTS43-44H-1730	1730	1756	2570	1226	7958	18.52
NTS43-44H-1810	1810	1856	2468	1178	7528	19.36
NTS43-44H-1890	1890	1926	2373	1134	7134	20.22
NTS43-44H-1970	1970	2026	2271	1092	6734	21.06

1) C_y, C_z and C_{dyn} = load capacities for pair of rails

2) C_{dyn} is used for lifetime calculation

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- **Double stroke (option VR):** In order to obtain the double stroke and allow the slider to extend in both directions, please remove the screws at the edge of the rail or order with VR suffix.

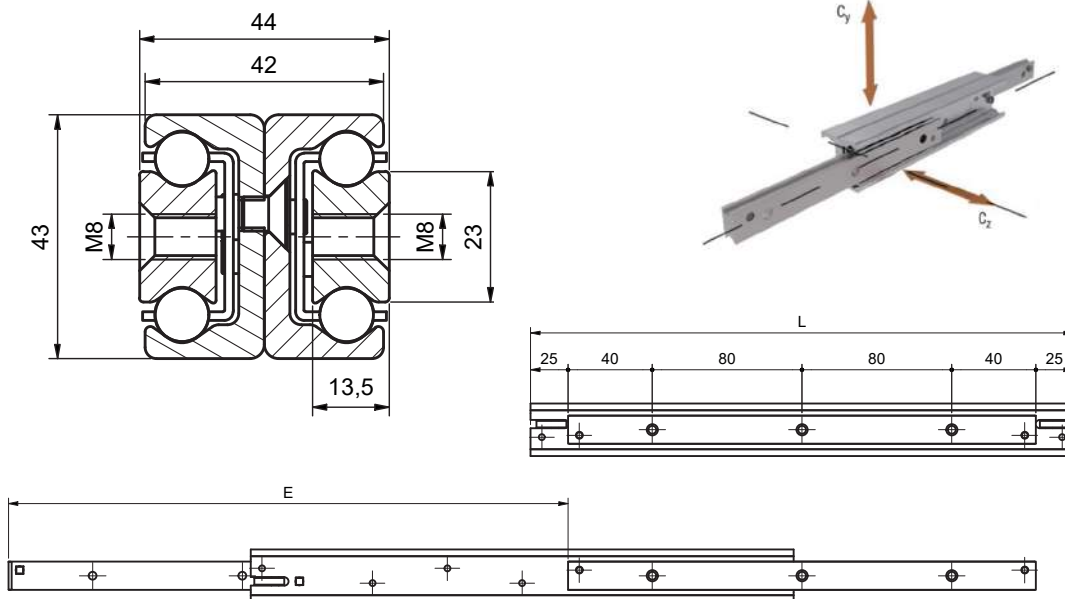
FULL EXTENSION

NTS43-44H..VRM

HT2.2

MATERIAL
Zinc-plated steel

L_{min}290 **L_{max}1970**



Order Number	Length	Extension	Cy ¹⁾	Cz ¹⁾	Cdyn ^{1) 2)}	Net Weight
	[mm]		[N]			
NTS43-44H-290-VRM	290	302	976	652	3938	2,76
NTS43-44H-370-VRM	370	402	1619	956	5716	3,52
NTS43-44H-450-VRM	450	472	2964	1656	6455	4,28
NTS43-44H-530-VRM	530	542	3575	1828	8135	5,04
NTS43-44H-610-VRM	610	642	4057	2247	8365	5,81
NTS43-44H-690-VRM	690	712	4865	2307	8745	6,57
NTS43-44H-770-VRM	770	782	5022	2268	9880	7,33
NTS43-44H-850-VRM	850	882	4751	2244	9732	8,09
NTS43-44H-930-VRM	930	952	4248	2011	11232	8,85
NTS43-44H-1010-VRM	1010	1022	4107	1901	11587	9,61
NTS43-44H-1090-VRM	1090	1122	3745	1768	11024	10,37
NTS43-44H-1170-VRM	1170	1192	3640	1657	9402	11,14
NTS43-44H-1250-VRM	1250	1262	3502	1568	9023	11,90
NTS43-44H-1330-VRM	1330	1362	3266	1544	8406	12,66
NTS43-44H-1410-VRM	1410	1432	2944	1431	7819	13,42
NTS43-44H-1490-VRM	1490	1502	2869	1352	7327	14,18
NTS43-44H-1570-VRM	1570	1602	2742	1309	6883	14,94
NTS43-44H-1650-VRM	1650	1672	2729	1250	6474	15,70
NTS43-44H-1730-VRM	1730	1742	2519	1201	6121	16,46
NTS43-44H-1810-VRM	1810	1842	2493	1154	5791	17,23
NTS43-44H-1890-VRM	1890	1912	2326	1111	5488	17,99
NTS43-44H-1970-VRM	1970	2012	2317	1070	5180	18,75

1) Cy, Cz and Cdyn = load capacities for pair of rails

2) Cdyn is used for lifetime calculation

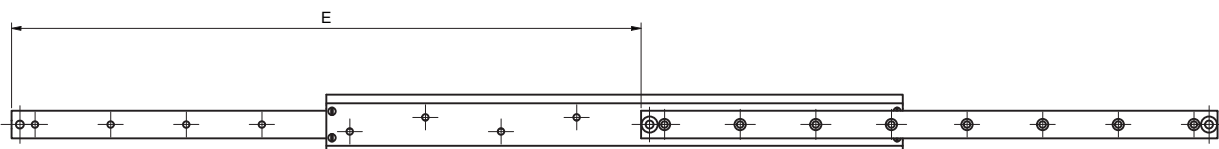
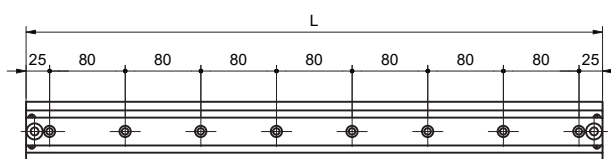
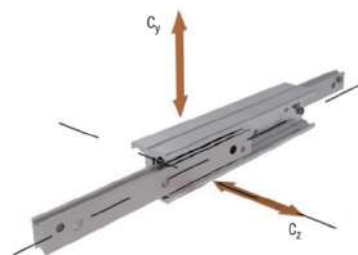
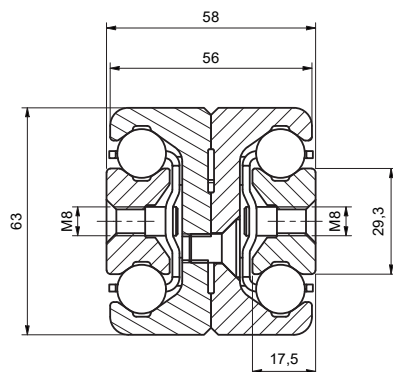
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- **VRM option** allows the slider to extend in both directions in a synchronized way.

FULL EXTENSION

NTS63-58H

MATERIAL
Zinc-plated steel

L_{min}610 **L_{max}1970**



Order Number	Length	Extension	Cy ¹⁾	Cz ¹⁾	Cdyn ^{1) 2)}	Net Weight
	[mm]		[N]	[N]		
NTS63-58H-610	610	666	8625	4982	2624	11,64
NTS63-58H-690	690	746	9744	5720	3468	13,17
NTS63-58H-770	770	826	11581	5954	3965	14,69
NTS63-58H-850	850	906	12726	5352	4209	16,22
NTS63-58H-930	930	986	13104	4748	5773	17,75
NTS63-58H-1010	1010	1066	13325	4337	6211	19,27
NTS63-58H-1090	1090	1146	12634	4000	6929	20,80
NTS63-58H-1170	1170	1226	12000	3732	8264	22,33
NTS63-58H-1250	1250	1306	11424	3550	8551	23,85
NTS63-58H-1330	1330	1386	10886	3390	9036	25,38
NTS63-58H-1410	1410	1466	10416	3240	8239	26,91
NTS63-58H-1490	1490	1546	9984	3110	7330	28,43
NTS63-58H-1570	1570	1626	9586	2986	6650	29,96
NTS63-58H-1650	1650	1706	9216	2868	6289	31,49
NTS63-58H-1730	1730	1786	8856	2766	5948	33,01
NTS63-58H-1810	1810	1866	8568	2664	5669	34,54
NTS63-58H-1890	1890	1946	8266	2570	5391	36,06
NTS63-58H-1970	1970	2026	7992	2490	5141	37,59

1) Cy, Cz and Cdyn = load capacities for pair of rails

2) Cdyn is used for lifetime calculation

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- **Double stroke (option VR):** In order to obtain the double stroke and allow the slider to extend in both directions, please remove the screws at the edge of the rail or order with VR suffix.

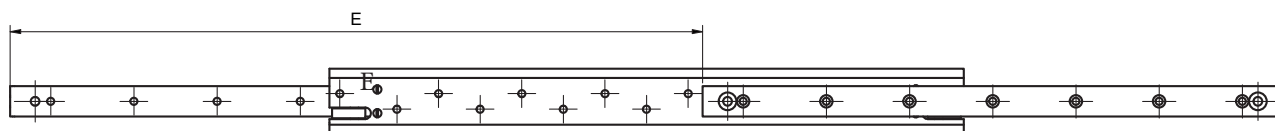
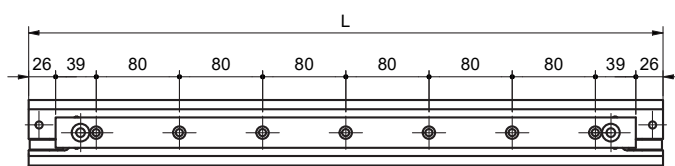
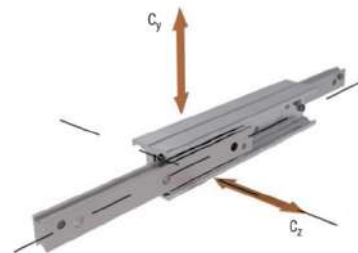
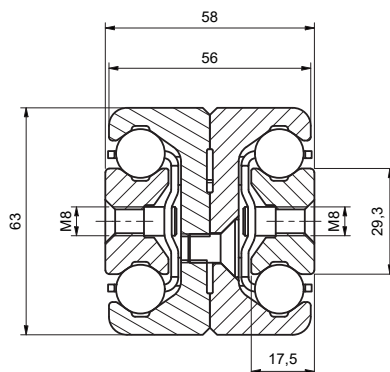
FULL EXTENSION

NTS63-58H..VRM

HT2.2

MATERIAL
Zinc-plated steel

Lmin610 Lmax1970



Order Number	Length	Extension	Cy ¹⁾	Cz ¹⁾	Cdyn ¹⁾²⁾	Net Weight
	[mm]		[N]	[kg]		
NTS63-58H-610-VRM	610	602	7763	4982	2624	11,08
NTS63-58H-690-VRM	690	682	8770	5606	3468	12,53
NTS63-58H-770-VRM	770	762	10423	5894	3965	13,99
NTS63-58H-850-VRM	850	842	11581	5513	4209	15,44
NTS63-58H-930-VRM	930	922	12187	4843	5773	16,89
NTS63-58H-1010-VRM	1010	1002	12659	4293	6211	18,35
NTS63-58H-1090-VRM	1090	1082	13265	4080	6929	19,80
NTS63-58H-1170-VRM	1170	1162	12720	3844	8264	21,25
NTS63-58H-1250-VRM	1250	1242	11881	3692	8551	22,70
NTS63-58H-1330-VRM	1330	1322	11213	3492	9036	24,16
NTS63-58H-1410-VRM	1410	1402	10624	3305	8239	25,61
NTS63-58H-1490-VRM	1490	1482	10084	3141	7330	27,06
NTS63-58H-1570-VRM	1570	1562	9586	2986	6650	28,52
NTS63-58H-1650-VRM	1650	1642	9124	2839	6289	29,97
NTS63-58H-1730-VRM	1730	1722	8679	2711	5948	31,42
NTS63-58H-1810-VRM	1810	1802	8311	2584	5669	32,88
NTS63-58H-1890-VRM	1890	1882	7935	2467	5391	34,33
NTS63-58H-1970-VRM	1970	1962	7592	2366	5141	35,78

1) Cy, Cz and Cdyn = load capacities for pair of rails
2) Cdyn is used for lifetime calculation

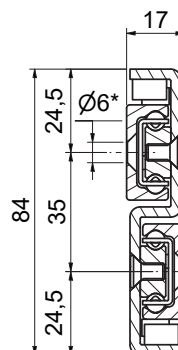
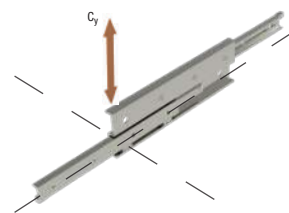
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- **VRM option** allows the slider to extend in both directions in a synchronized way.

FULL EXTENSION

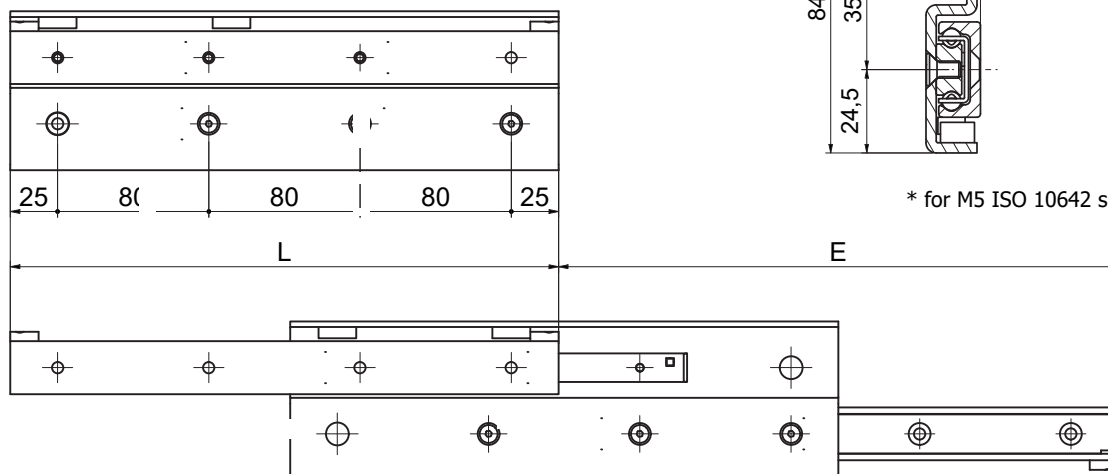
NTVZ84-17H..S

MATERIAL
Zinc-plated steel

L_{min}290 **L_{max}1490**



* for M5 ISO 10642 screw



Order Number	Length	Extension	C _y ¹⁾	C _{dyn} ¹⁾²⁾	Net Weight
	[mm]		[N]		[kg]
NTVZ84-17H-290-S	290	296	1030	1967	1,88
NTVZ84-17H-370-S	370	380	1714	3016	2,40
NTVZ84-17H-450-S	450	464	2145	3537	2,92
NTVZ84-17H-530-S	530	548	2145	3439	3,44
NTVZ84-17H-610-S	610	630	2820	3922	3,95
NTVZ84-17H-690-S	690	714	3277	4135	4,47
NTVZ84-17H-770-S	770	798	3417	4656	4,99
NTVZ84-17H-850-S	850	864	3413	5317	5,51
NTVZ84-17H-930-S	930	950	3456	5359	6,03
NTVZ84-17H-1010-S	1010	1034	3382	4706	6,55
NTVZ84-17H-1090-S	1090	1118	3186	4322	7,07
NTVZ84-17H-1170-S	1170	1202	2990	3961	7,58
NTVZ84-17H-1250-S	1250	1266	2908	3769	8,10
NTVZ84-17H-1330-S	1330	1350	2771	3518	8,62
NTVZ84-17H-1410-S	1410	1434	2638	3285	9,14
NTVZ84-17H-1490-S	1490	1518	2494	3048	9,66

1) C_y, C_z and C_{dyn} = load capacities for pair of rails

2) C_{dyn} is used for lifetime calculation

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43).

- This guide allows stroke in a single direction; in order to have double stroke, please select -D suffix version.

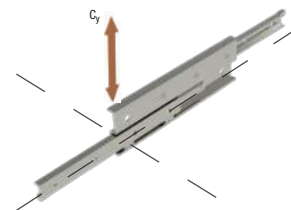
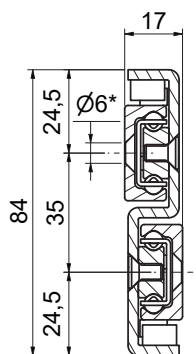
FULL EXTENSION

NTVZ84-17H..D

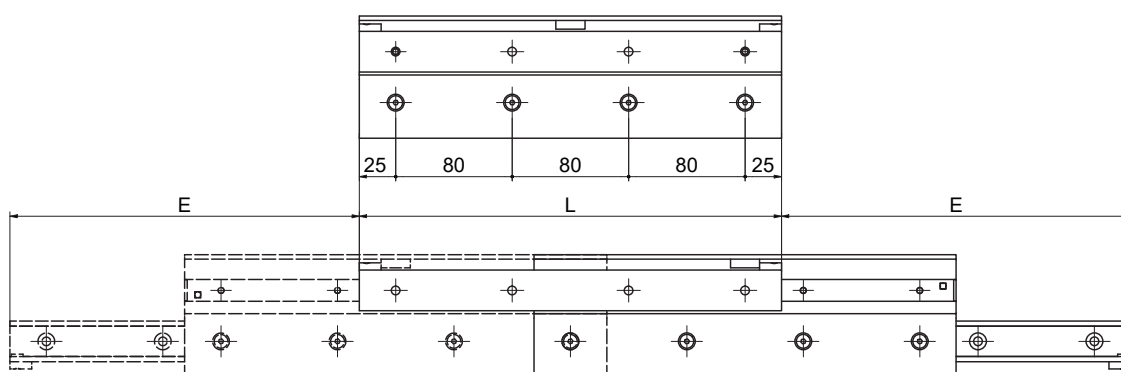
HT2.2

MATERIAL
Zinc-plated steel

L_{min}290 **L_{max}1490**



* for M5 ISO 10642 screw



Order Number	Length	Extension	C _y ¹⁾	C _{dyn} ^{1) 2)}	Net Weight
	[mm]		[N]		
NTVZ84-17H-290-D	290	240	1968	1967	2,01
NTVZ84-17H-370-D	370	320	2352	2654	2,56
NTVZ84-17H-450-D	450	400	2683	3395	3,12
NTVZ84-17H-530-D	530	480	3402	3439	3,67
NTVZ84-17H-610-D	610	560	3780	4157	4,23
NTVZ84-17H-690-D	690	640	4145	4135	4,78
NTVZ84-17H-770-D	770	720	4134	4656	5,34
NTVZ84-17H-850-D	850	800	4057	5317	5,89
NTVZ84-17H-930-D	930	880	3931	5359	6,45
NTVZ84-17H-1010-D	1010	960	3793	4964	7,00
NTVZ84-17H-1090-D	1090	1040	3563	4440	7,55
NTVZ84-17H-1170-D	1170	1120	3360	3961	8,11
NTVZ84-17H-1250-D	1250	1200	3186	3873	8,66
NTVZ84-17H-1330-D	1330	1280	3023	3518	9,22
NTVZ84-17H-1410-D	1410	1360	2879	3285	9,77
NTVZ84-17H-1490-D	1490	1440	2749	3090	10,33

1) C_y, C_z and C_{dyn} = load capacities for pair of rails

2) C_{dyn} is used for lifetime calculation

• For technical information see Chapter 4 (page 40).

-S suffix version.

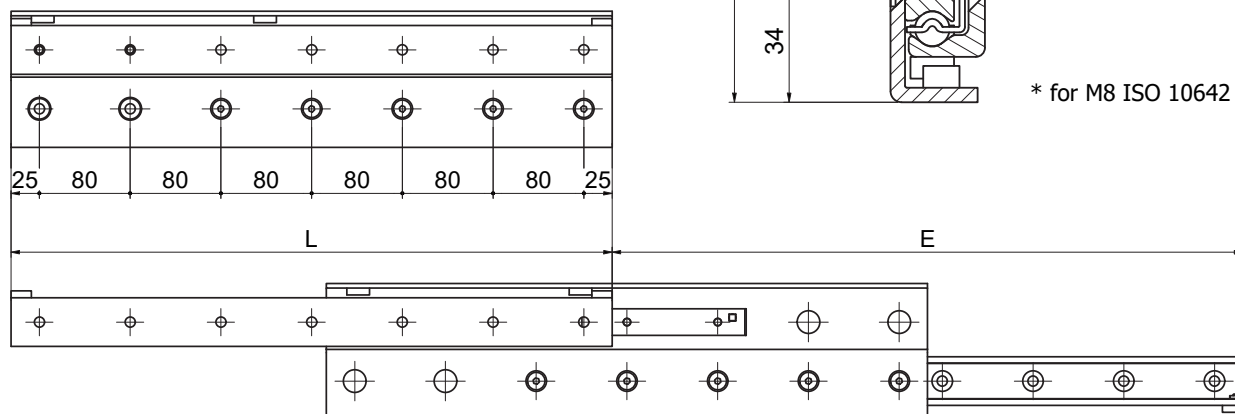
• This guide allows double stroke; in order to have single stroke, please select

FULL EXTENSION

NTVZ120-28H..S

MATERIAL
Zinc-plated steel

L_{min}530 **L_{max}1970**



* for M8 ISO 10642 screw

Order Number	Length	Extension	Cy ¹⁾	Cdyn ^{1) 2)}	Net Weight
	[mm]		[N]		
NTVZ120-28H-530-S	530	556	4004	5946	7,79
NTVZ120-28H-610-S	610	626	5291	7535	8,97
NTVZ120-28H-690-S	690	726	5857	8325	10,14
NTVZ120-28H-770-S	770	796	6872	9343	11,32
NTVZ120-28H-850-S	850	866	7416	9366	12,49
NTVZ120-28H-930-S	930	966	8326	9663	13,67
NTVZ120-28H-1010-S	1010	1036	8584	10792	14,85
NTVZ120-28H-1090-S	1090	1106	8483	11343	16,02
NTVZ120-28H-1170-S	1170	1206	7743	12134	17,20
NTVZ120-28H-1250-S	1250	1276	7285	11744	18,37
NTVZ120-28H-1330-S	1330	1376	6586	10892	19,55
NTVZ120-28H-1410-S	1410	1446	6234	10111	20,72
NTVZ120-28H-1490-S	1490	1516	6089	9696	21,90
NTVZ120-28H-1570-S	1570	1616	5831	9125	23,08
NTVZ120-28H-1650-S	1650	1686	5668	8724	24,25
NTVZ120-28H-1730-S	1730	1756	5408	8193	25,43
NTVZ120-28H-1810-S	1810	1856	5165	7708	26,60
NTVZ120-28H-1890-S	1890	1926	5070	7459	27,78
NTVZ120-28H-1970-S	1970	2026	4860	7052	28,96

1) Cy, Cz and Cdyn = load capacities for pair of rails

2) Cdyn is used for lifetime calculation

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- This guide allows stroke in a single direction; in order to have double stroke, please select -D suffix version.

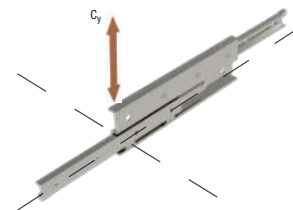
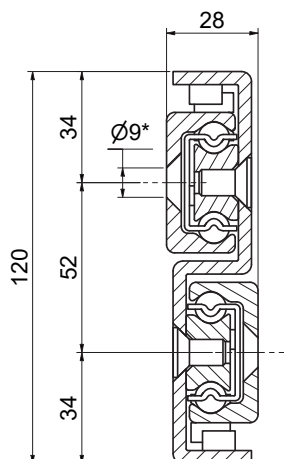
FULL EXTENSION

NTVZ120-28H..D

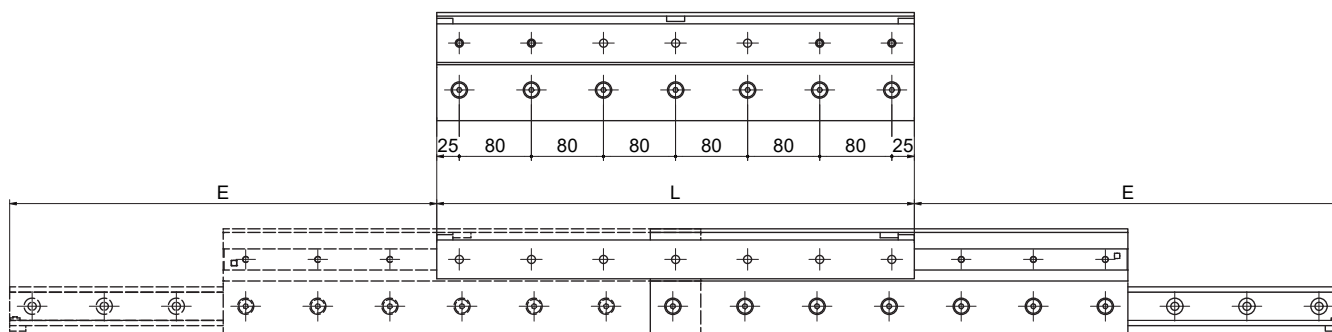
HT2.2

MATERIAL
Zinc-plated steel

L_{min}530 **L_{max}1970**



* for M8 ISO 10642 screw



Order Number	Length	Extension	Cy ¹⁾	Cdyn ²⁾	Net Weight
	[mm]		[N]		
NTVZ120-28H-530-D	530	474	5258	6073	8,56
NTVZ120-28H-610-D	610	554	6778	7275	9,85
NTVZ120-28H-690-D	690	634	7748	7817	11,14
NTVZ120-28H-770-D	770	714	8263	8937	12,44
NTVZ120-28H-850-D	850	794	9531	10031	13,73
NTVZ120-28H-930-D	930	874	10098	11017	15,02
NTVZ120-28H-1010-D	1010	954	9747	11141	16,31
NTVZ120-28H-1090-D	1090	1034	9395	11516	17,60
NTVZ120-28H-1170-D	1170	1114	8890	13158	18,90
NTVZ120-28H-1250-D	1250	1194	8079	13566	20,19
NTVZ120-28H-1330-D	1330	1274	7370	13036	21,48
NTVZ120-28H-1410-D	1410	1354	6992	11970	22,77
NTVZ120-28H-1490-D	1490	1434	6701	10819	24,06
NTVZ120-28H-1570-D	1570	1514	6441	10359	25,36
NTVZ120-28H-1650-D	1650	1594	6145	9721	26,65
NTVZ120-28H-1730-D	1730	1674	5935	9241	27,94
NTVZ120-28H-1810-D	1810	1754	5719	8653	29,23
NTVZ120-28H-1890-D	1890	1834	5488	7961	30,53
NTVZ120-28H-1970-D	1970	1914	5313	7602	31,82

1) Cy, Cz and Cdyn = load capacities for pair of rails

2) Cdyn is used for lifetime calculation

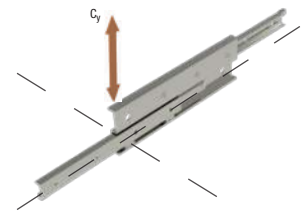
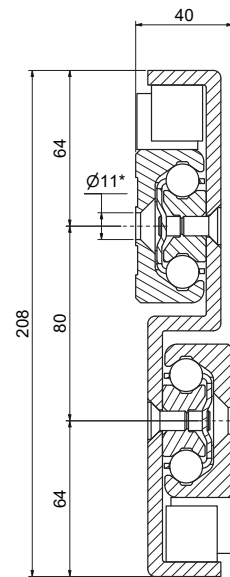
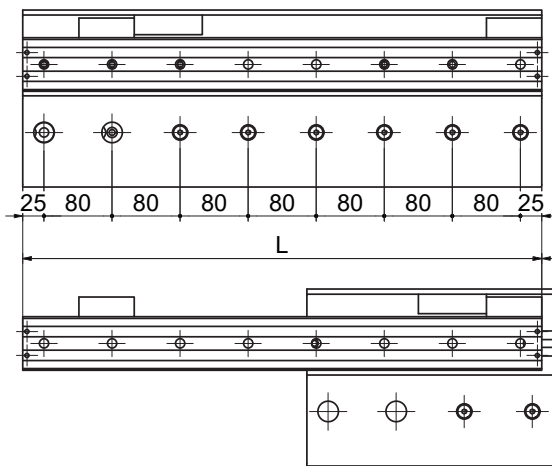
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- This guide allows double stroke; in order to have single stroke, please select -S suffix version.

FULL EXTENSION

NTVZ208-40H..S

MATERIAL
Zinc-plated steel

L_{min}610 **L_{max}1970**



* for M10 ISO 10642 screw

Order Number	Length	Extension	C _y ¹⁾	C _{dyn} ^{1) 2)}	Net Weight
	[mm]		[N]		
NTVZ208-40H-610-S	610	668	7197	9715	20,33
NTVZ208-40H-690-S	690	748	8214	12576	23,00
NTVZ208-40H-770-S	770	828	10125	13701	25,66
NTVZ208-40H-850-S	850	908	11836	15773	28,33
NTVZ208-40H-930-S	930	988	12981	16788	30,99
NTVZ208-40H-1010-S	1010	1068	14630	18351	33,66
NTVZ208-40H-1090-S	1090	1148	16803	20547	36,33
NTVZ208-40H-1170-S	1170	1228	18428	21052	38,99
NTVZ208-40H-1250-S	1250	1308	19908	21011	41,66
NTVZ208-40H-1330-S	1330	1388	20852	20283	44,33
NTVZ208-40H-1410-S	1410	1468	22718	19742	46,99
NTVZ208-40H-1490-S	1490	1548	23008	17845	49,66
NTVZ208-40H-1570-S	1570	1628	22537	17178	52,32
NTVZ208-40H-1650-S	1650	1708	21420	16059	54,99
NTVZ208-40H-1730-S	1730	1788	21206	15649	57,66
NTVZ208-40H-1810-S	1810	1868	20840	15149	60,32
NTVZ208-40H-1890-S	1890	1948	20231	14496	62,99
NTVZ208-40H-1970-S	1970	2028	19341	13668	65,66

1) C_y, C_z and C_{dyn} = load capacities for pair of rails

2) C_{dyn} is used for lifetime calculation

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- This guide allows stroke in a single direction; in order to have double stroke, please select -D suffix version

FULL EXTENSION

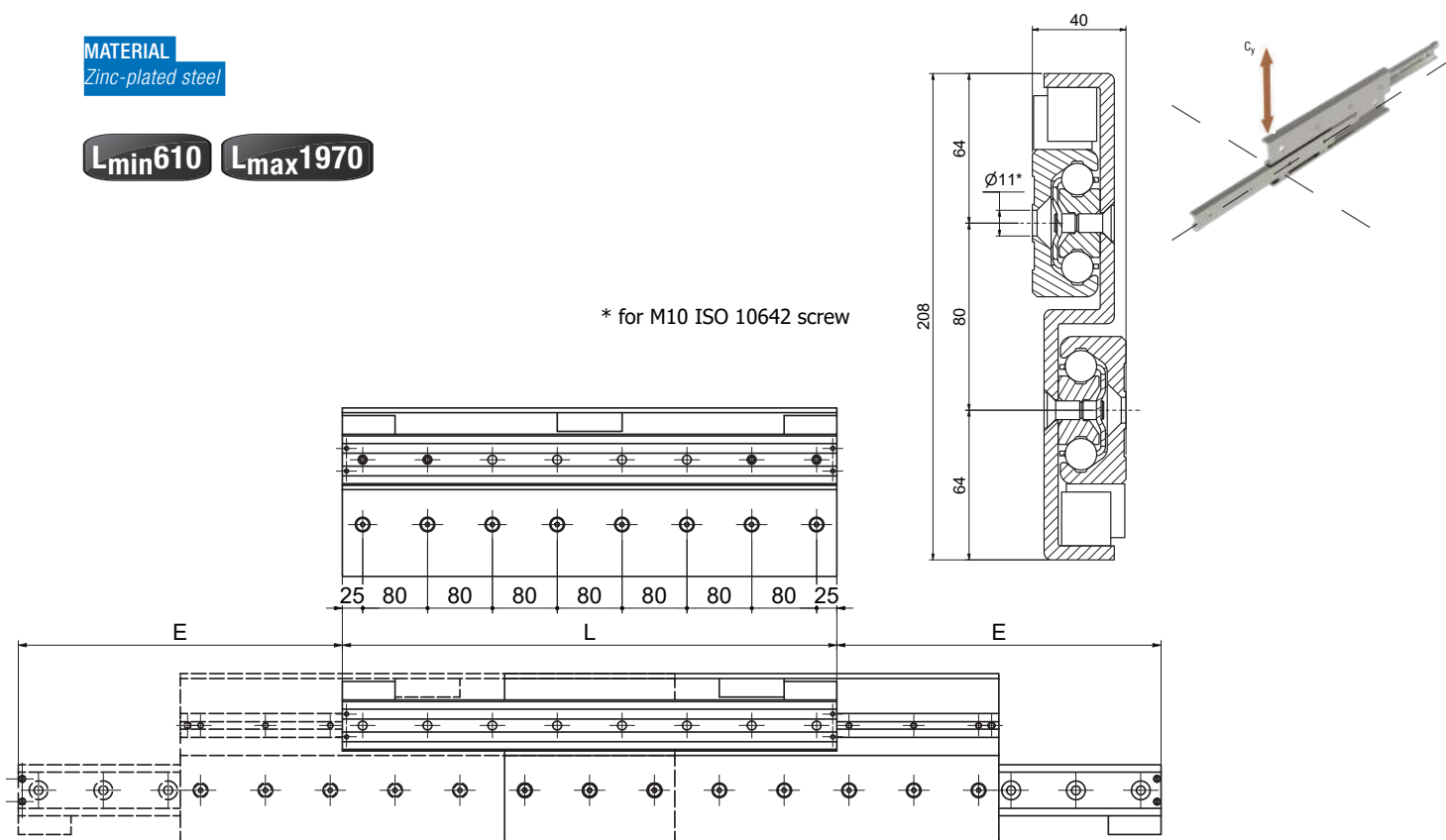
NTVZ208-40H..D

HT2.2

MATERIAL
Zinc-plated steel

L_{min}610 **L_{max}1970**

* for M10 ISO 10642 screw

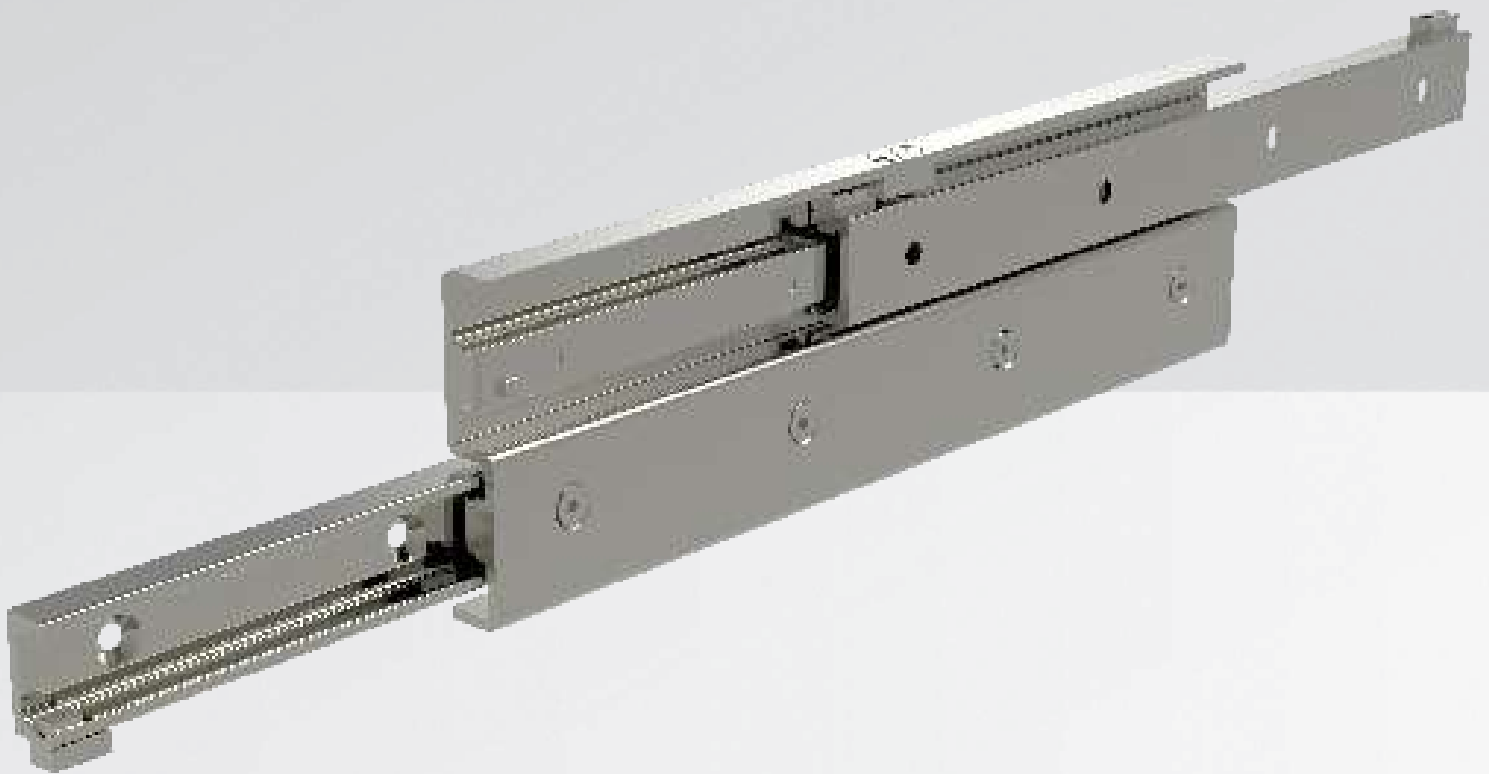


Order Number	Length	Extension	Cy ¹⁾	Cdyn ^{1) 2)}	Net Weight
	[mm]		[N]		
NTVZ208-40H-610-D	610	400	23328	10661	21,9
NTVZ208-40H-690-D	690	480	24300	12278	24,77
NTVZ208-40H-770-D	770	560	25220	13388	27,64
NTVZ208-40H-850-D	850	640	26441	15162	30,52
NTVZ208-40H-930-D	930	720	27851	17088	33,39
NTVZ208-40H-1010-D	1010	800	28820	18391	36,26
NTVZ208-40H-1090-D	1090	880	30083	19445	39,13
NTVZ208-40H-1170-D	1170	960	31910	20543	42,00
NTVZ208-40H-1250-D	1250	1040	32957	22591	44,88
NTVZ208-40H-1330-D	1330	1120	34774	22371	47,75
NTVZ208-40H-1410-D	1410	1200	35480	20745	50,62
NTVZ208-40H-1490-D	1490	1280	35315	19011	53,49
NTVZ208-40H-1570-D	1570	1360	35118	18355	56,37
NTVZ208-40H-1650-D	1650	1440	34427	17275	59,24
NTVZ208-40H-1730-D	1730	1520	33017	16308	62,11
NTVZ208-40H-1810-D	1810	1600	31055	15417	64,98
NTVZ208-40H-1890-D	1890	1680	29398	14623	67,85
NTVZ208-40H-1970-D	1970	1760	27228	13874	70,73

1) Cy, Cz and Cdyn = load capacities for pair of rails

2) Cdyn is used for lifetime calculation

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- This guide allows double stroke; in order to have single stroke, please select -S suffix version



OVER EXTENSION

HT3

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HT3.1 PRODUCT OVERVIEW

PAGE 33

HT3.2 PARTIAL EXTENSION

PAGE 32

- NTUZ84-30H..R / NTUZ84-30H..L

PAGE 33

- NTUZ120-50H..R / NTUZ120-50H..L

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- NTUZ208-69H..R / NTUZ208-69H..L

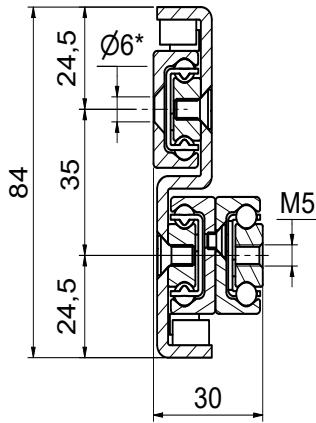
PRODUCT OVERVIEW

OVER EXTENSION NTUZ-H

HT3.1

NTUZ84-30H

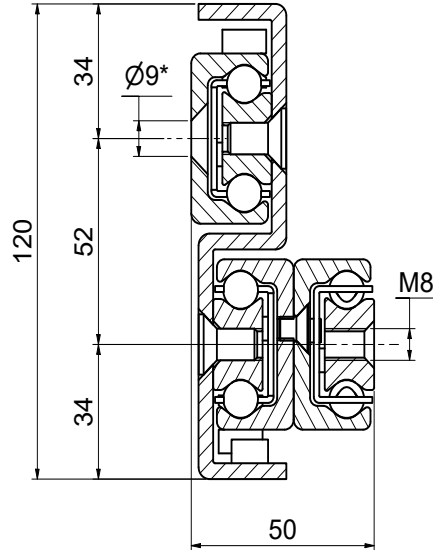
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* for M5 ISO 10642 screw

NTUZ120-50H

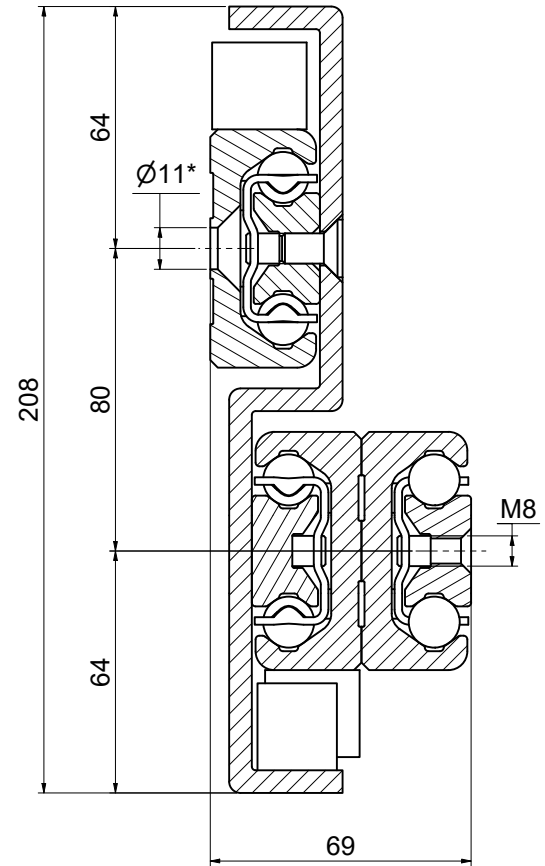
See page 33



* for M8 ISO 10642 screw

NTUZ208-69H

See page 34



* for M10 ISO 10642 screw

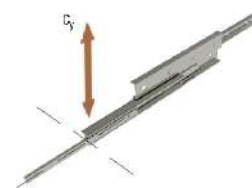
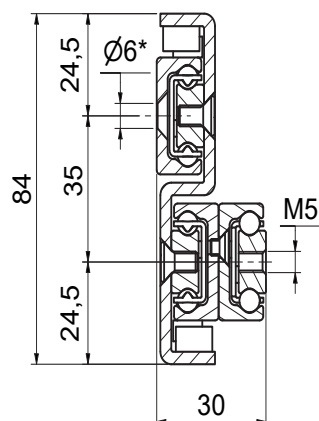
OVER EXTENSION

NTUZ84-30H..R / NTUZ84-30H..L

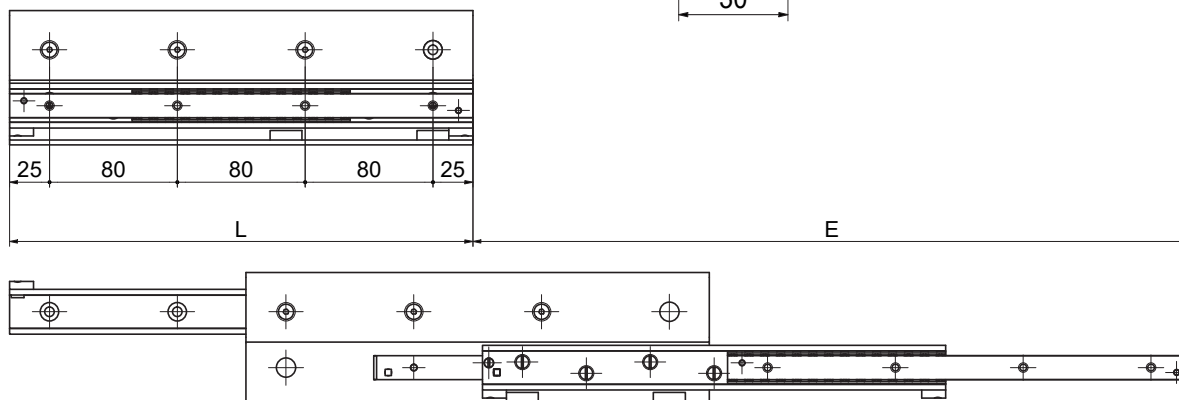
HT3.2

MATERIAL
Zinc-plated steel

L_{min}290 **L_{max}1170**



* for M5 ISO 10642 screw



Order Number	Right	Left	Length	Extension	Cy ¹⁾	Cdyn ^{1) 2)}	Net Weight
			[mm]		[N]		
NTUZH84-30H-290	-R	-L	290	449,5	668	1197	2,48
NTUZH84-30H-370	-R	-L	370	573,5	1005	1863	3,16
NTUZH84-30H-450	-R	-L	450	697,5	1265	2230	3,85
NTUZH84-30H-530	-R	-L	530	821,5	1389	1985	4,53
NTUZH84-30H-610	-R	-L	610	953,5	1549	2545	5,22
NTUZH84-30H-690	-R	-L	690	1077,5	1499	2679	5,90
NTUZH84-30H-770	-R	-L	770	1201,5	1404	2710	6,58
NTUZH84-30H-850	-R	-L	850	1297,5	1382	2581	7,27
NTUZH84-30H-930	-R	-L	930	1423,5	1426	2585	7,95
NTUZH84-30H-1010	-R	-L	1010	1557,5	1362	2402	8,64
NTUZH84-30H-1090	-R	-L	1090	1681,5	1300	2235	9,32
NTUZH84-30H-1170	-R	-L	1170	1805,5	1220	2048	10,01

1) Cy and Cdyn = load capacities for pair of rails

2) Cdyn is used for lifetime calculation

- lication engineering division.
- For technical information see Chapter 5 (page 43)

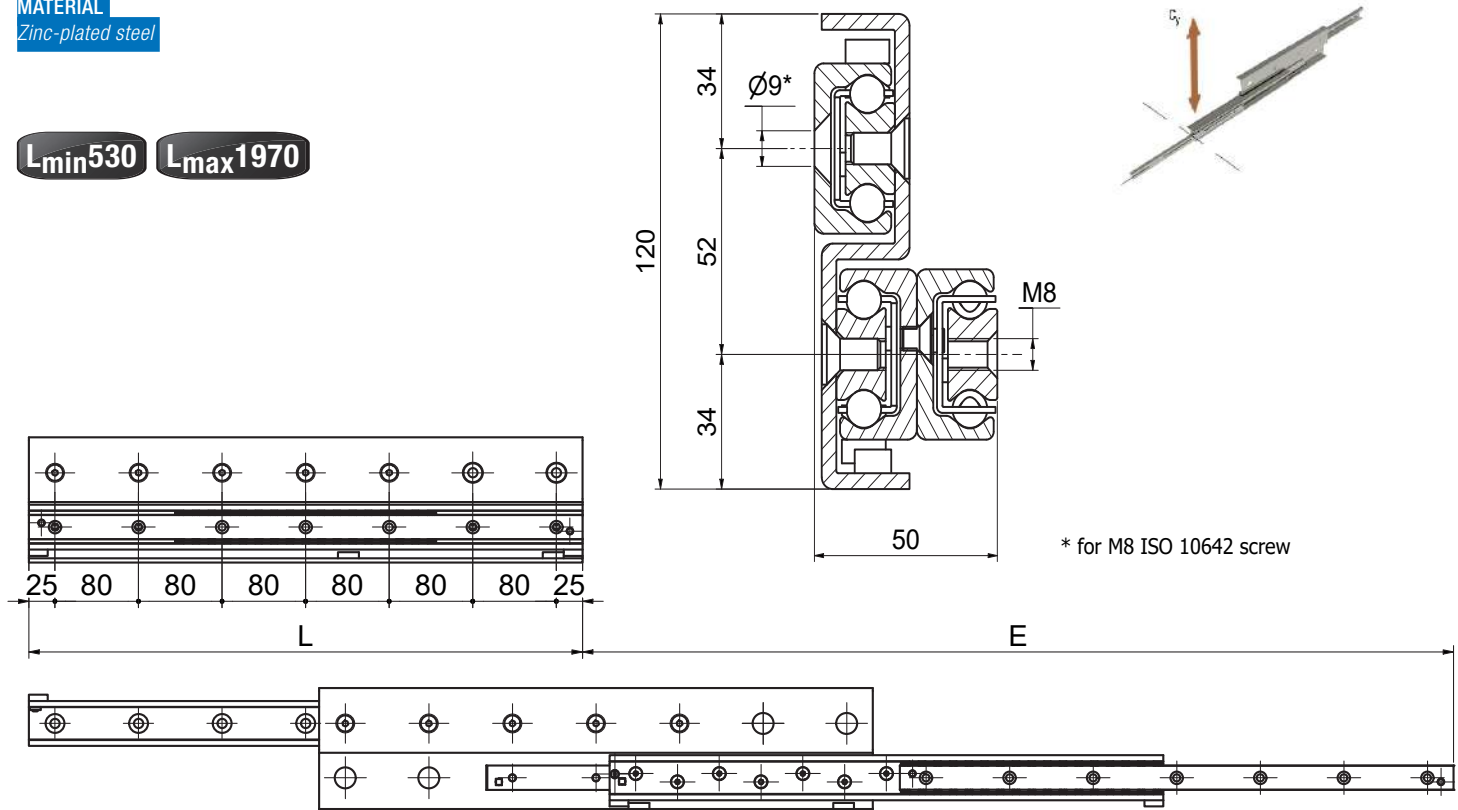
Example code for right version: NTUZ84-30H-770-R;
Example code for left version: NTUZ84-30H-770-L.

OVER EXTENSION

NTUZ120-50H..R / NTUZ120-50H..L

MATERIAL
Zinc-plated steel

L_{min}530 **L_{max}1970**



* for M8 ISO 10642 screw

Order Number	Right	Left	Length	Extension	Cy ¹⁾	Cdyn ^{1) 2)}	Net Weight
			[mm]		[N]		[kg]
NTUZH120-50H-530	-R	-L	530	834	2141	4121	11,30
NTUZH120-50H-610	-R	-L	610	939	3098	4894	13,01
NTUZH120-50H-690	-R	-L	690	1089	3547	5253	14,71
NTUZH120-50H-770	-R	-L	770	1194	4034	6034	16,42
NTUZH120-50H-850	-R	-L	850	1299	3953	6500	18,12
NTUZH120-50H-930	-R	-L	930	1449	4152	6626	19,83
NTUZH120-50H-1010	-R	-L	1010	1554	4483	6960	21,53
NTUZH120-50H-1090	-R	-L	1090	1659	4517	6837	23,24
NTUZH120-50H-1170	-R	-L	1170	1809	4140	6120	24,95
NTUZH120-50H-1250	-R	-L	1250	1914	4159	6014	26,65
NTUZH120-50H-1330	-R	-L	1330	2064	3965	5616	28,36
NTUZH120-50H-1410	-R	-L	1410	2169	3763	5228	30,06
NTUZH120-50H-1490	-R	-L	1490	2274	3672	5008	31,77
NTUZH120-50H-1570	-R	-L	1570	2409	3528	4728	33,47
NTUZH120-50H-1650	-R	-L	1650	2529	3384	4461	35,18
NTUZH120-50H-1730	-R	-L	1730	2634	3240	4204	36,88
NTUZH120-50H-1810	-R	-L	1810	2784	3079	3936	38,59
NTUZH120-50H-1890	-R	-L	1890	2889	3000	3780	40,30
NTUZH120-50H-1970	-R	-L	1970	3039	2868	3564	42,00

1) Cy and Cdyn = load capacities for pair of rails

2) Cdyn is used for lifetime calculation

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)

Example code for right version: NTUZ120-50H-770-R;
Example code for left version: NTUZ120-50H-770-L.

OVER EXTENSION

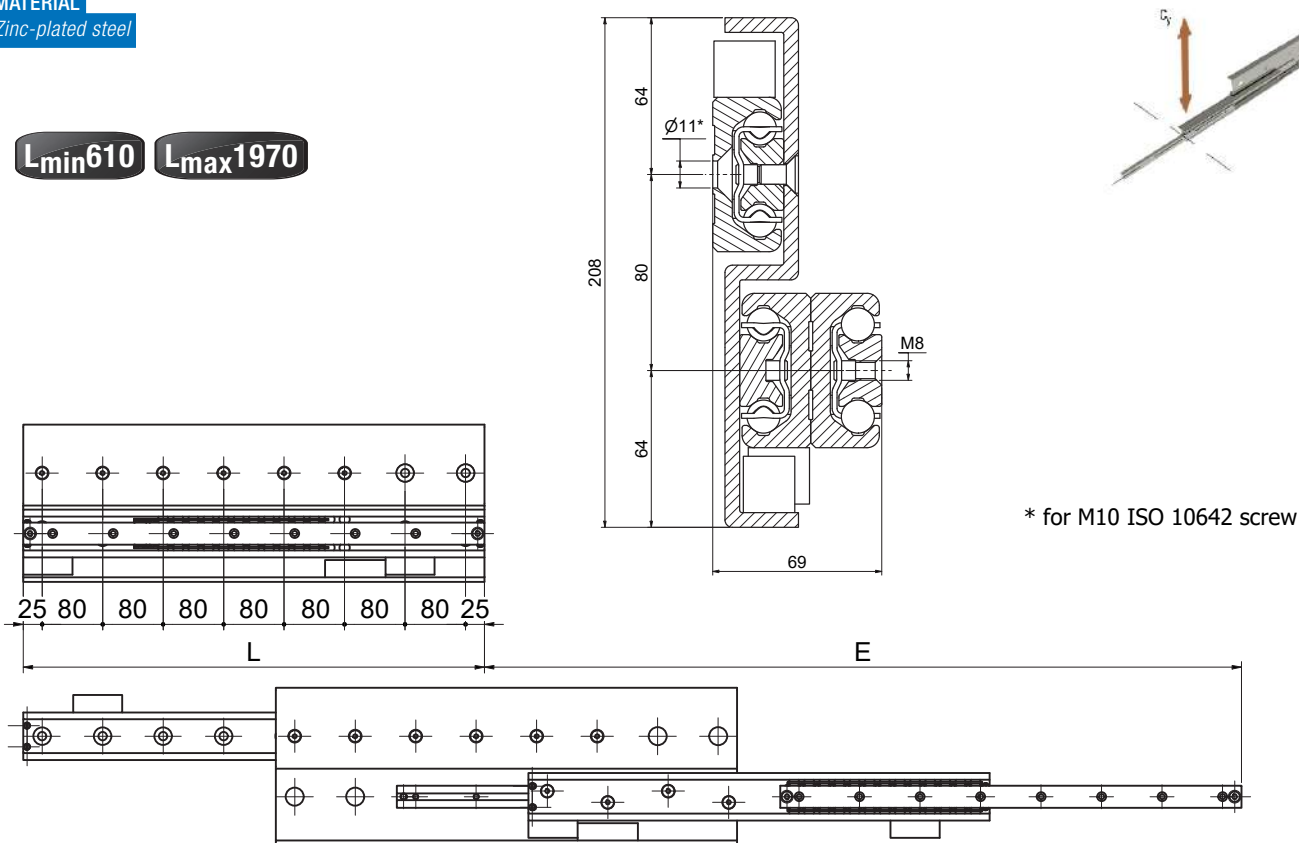
NTUZ208-69H..R / NTUZ208-69H..L

HT3.2

MATERIAL

Zinc-plated steel

Lmin610 **Lmax1970**



* for M10 ISO 10642 screw

Order Number	Right	Left	Length	Extension	Cy ¹⁾	Cdyn ^{1) 2)}	Net Weight
			[mm]		[N]		
NTUZH208-69H-610	-R	-L	610	1001	4121	7533	26,47
NTUZH208-69H-690	-R	-L	690	1121	4312	6484	29,94
NTUZH208-69H-770	-R	-L	770	1241	5512	8606	33,41
NTUZH208-69H-850	-R	-L	850	1361	6955	10507	36,88
NTUZH208-69H-930	-R	-L	930	1481	7688	11272	40,36
NTUZH208-69H-1010	-R	-L	1010	1601	7137	10180	43,83
NTUZH208-69H-1090	-R	-L	1090	1721	8359	11624	47,30
NTUZH208-69H-1170	-R	-L	1170	1841	9376	12733	50,77
NTUZH208-69H-1250	-R	-L	1250	1961	9721	12915	54,24
NTUZH208-69H-1330	-R	-L	1330	2081	9173	11936	57,71
NTUZH208-69H-1410	-R	-L	1410	2201	9750	12443	61,18
NTUZH208-69H-1490	-R	-L	1490	2321	10072	12620	64,66
NTUZH208-69H-1570	-R	-L	1570	2441	9989	12300	68,13
NTUZH208-69H-1650	-R	-L	1650	2561	9519	11528	71,60
NTUZH208-69H-1730	-R	-L	1730	2681	9529	11359	75,07
NTUZH208-69H-1810	-R	-L	1810	2801	9412	11052	78,54
NTUZH208-69H-1890	-R	-L	1890	2921	9168	10611	82,01
NTUZH208-69H-1970	-R	-L	1970	3041	8785	10029	85,49

1) Cy and Cdyn = load capacities for pair of rails

2) Cdyn is used for lifetime calculation

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)
- Choose R suffix for right side guide or L suffix for left side one.
Example code for right version: NTUZ208-69H-770-R;
Example code for left version: NTUZ208-69H-770-L.



LINEAR GUIDES



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HT4.1 PRODUCT OVERVIEW

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HT4.2 LINEAR GUIDE

PAGE 38

- NTSF28H

PAGE 39

- NTSF43H

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- NTSF63H

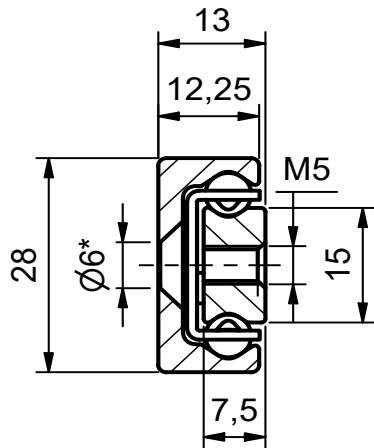
PRODUCT OVERVIEW

LINEAR GUIDES NTSF-H

HT4.1

NTSF28H

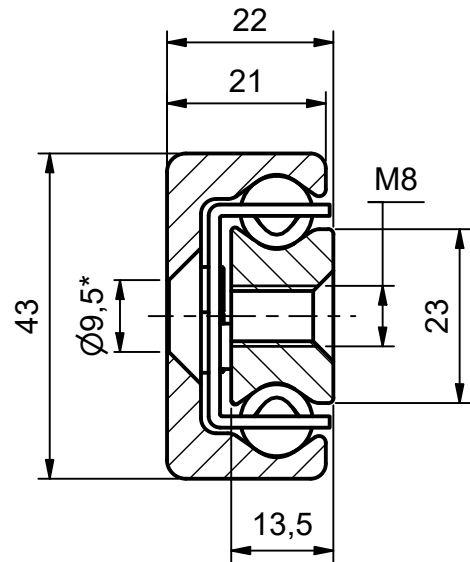
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* for M5 ISO 10642 screw

NTSF43H

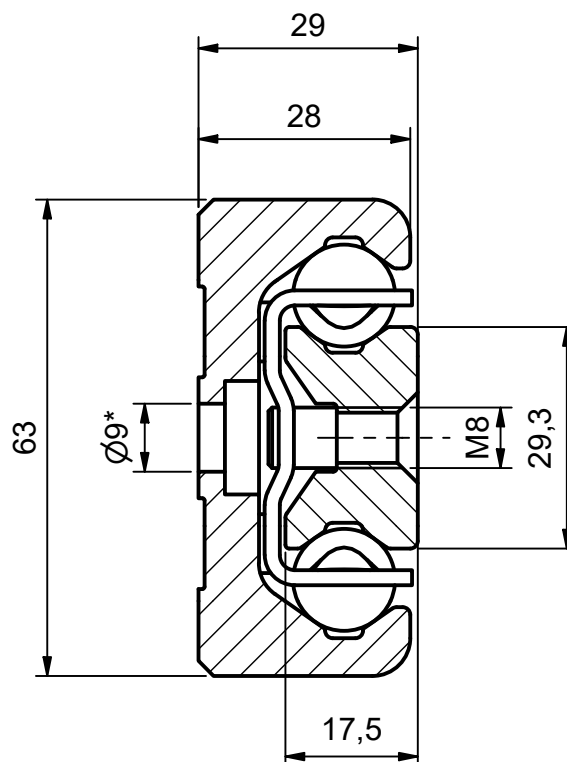
See page 39



* for M8 ISO 10642 screw

NTSF63H

See page 40



* for M8 ISO 4762 screw

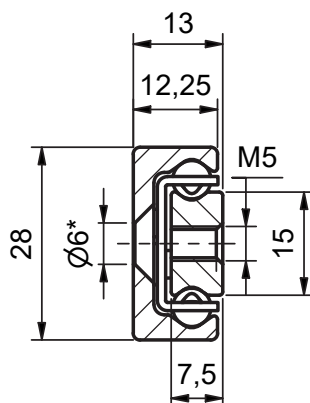
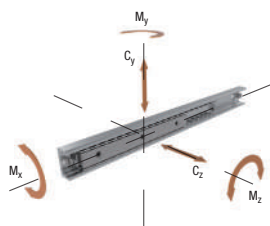
LINEAR GUIDES

NTSF28H

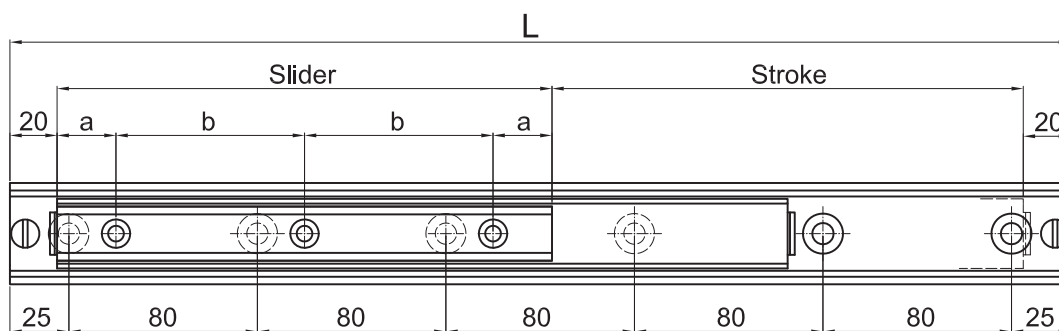
HT4.2

MATERIAL
Zinc-plated steel

Lmin150 Lmax1650



* for M5 ISO 10642 screw



Rail	Length [mm]
	130 - 210 - 290 - 370 - 450 - 530 - 610 - 690 - 770 - 850 - 930 - 1010 - 1170 - 1330 - 1490 - 1650

Slider	a	b	C _y ¹⁾	C _z ¹⁾	M _x ³⁾	M _y ¹⁾	M _z ¹⁾	C ₁₀₀ ¹⁾²⁾
[mm]			[N]		[Nm]			[N]
60	10	20	4817	3373	15	32	48	8947
80	10	20	6744	4722	21	64	88	11349
130	25	80	11561	8095	36	176	252	16587
210	25	80	19268	13492	61	472	672	23746
290	25	80	26975	18889	85	912	1304	30067
370	25	80	34682	24286	109	1498	2138	35860
450	25	80	42390	29682	134	2226	3180	41276

1) C_y, C_z, M_y, M_z and C₁₀₀ = load and torque capacities for pair of rails

2) C₁₀₀ is used for lifetime calculation

3) M_x = torque capacity for single rail

- If you are planning to combine several options, please contact our application engineering division.
- For technical information see Chapter 4 (page 40).
- Calculate the overall NTSF net weight by using the following formulas:
Slider weight [kg] = 0.81 [kg/m] * slider length [m]
Guide weight [kg] = 1.05 [kg/m] * guide length [m]
Cage weight [kg] = 0.4 [kg/m] * (slider length + stroke/2) [m]
NTSF weight [kg] = slider weight + guide weight + cage weight
- L = Available lengths [mm]:** 150, 210, 290, 370, 450, 530, 610, 690, 770, 850, 930, 1010, 1170, 1330, 1490, 1650. Other lengths are available on request up to a maximum length of 2000 mm.

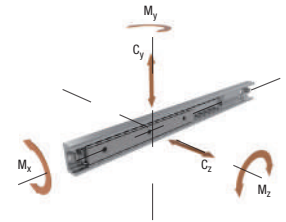
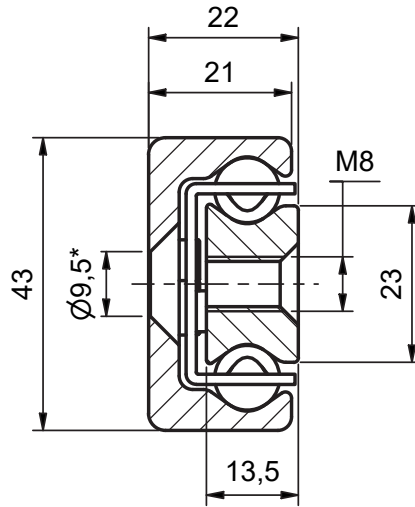
Code example: **NTSF28H 290 690**
 Slider length: 290mm
 Rails length: 690mm
 (stroke = 360 mm = 690 - 290 mm – stop length 2 x 20)

LINEAR GUIDES

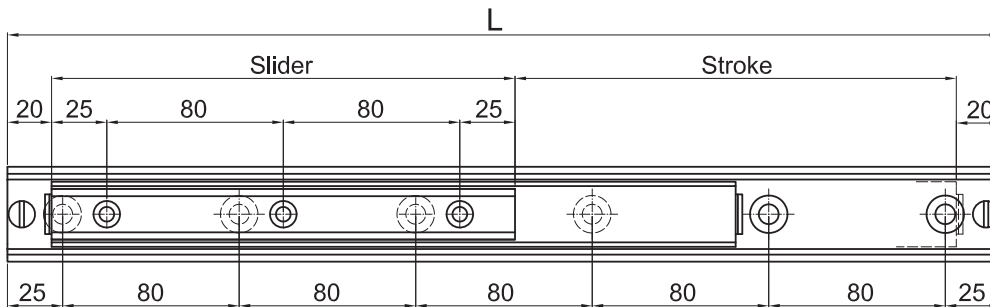
NTSF43H

MATERIAL
Zinc-plated steel

L_{min}290 **L_{max}1970**



* for M8 ISO 10642 screw



Rail	Length [mm]
	290 - 370 - 450 - 530 - 610 - 690 - 770 - 850 - 930 - 1010 - 1170 - 1330 - 1490 - 1650 - 1810 - 1970

Slider [mm]	C _y ¹⁾ [N]	C _z ¹⁾ [N]	M _x ³⁾ [Nm]	M _y ¹⁾ [Nm]	M _z ¹⁾ [Nm]	C ₁₀₀ ¹⁾²⁾ [N]
130	23093	16170	106	242	346	40002
210	37526	26276	172	614	876	56293
290	54845	38403	251	1280	1828	73485
370	69278	48509	317	2022	2886	86574
450	83711	58615	383	2930	4186	98861
530	101031	70742	462	4244	6062	112793
610	115464	80848	529	5524	7890	123860

1) C_y, C_z, M_y, M_z and C₁₀₀ = load and torque capacities for pair of rails

2) C₁₀₀ is used for lifetime calculation

3) M_x = torque capacity for single rail

- If you are planning to combine several options, please contact our application engineering division.
- For technical information see Chapter 4 (page 43).

930, 1010, 1170, 1330, 1490, 1650, 1810, 1970. Other lengths are available on request up to a maximum length of 2000 mm.

- Calculate the overall NTSF net weight by using the following formulas:

Slider weight [kg] = 2.10 [kg/m] * slider length [m]

Guide weight [kg] = 2.61 [kg/m] * guide length [m]

Cage weight [kg] = 0.77 [kg/m] * (slider length + stroke/2) [m]

NTSF weight [kg] = slider weight + guide weight + cage weight

- **L = Available lengths [mm]:** 290, 370, 450, 530, 610, 690, 770, 850,

Code example: **NTSF43H 290 690**

Rail NTSF43H: slider length 290 mm, length 690 mm

(stroke = 360 mm = 690 - 290 mm – stop length 2 x 20)

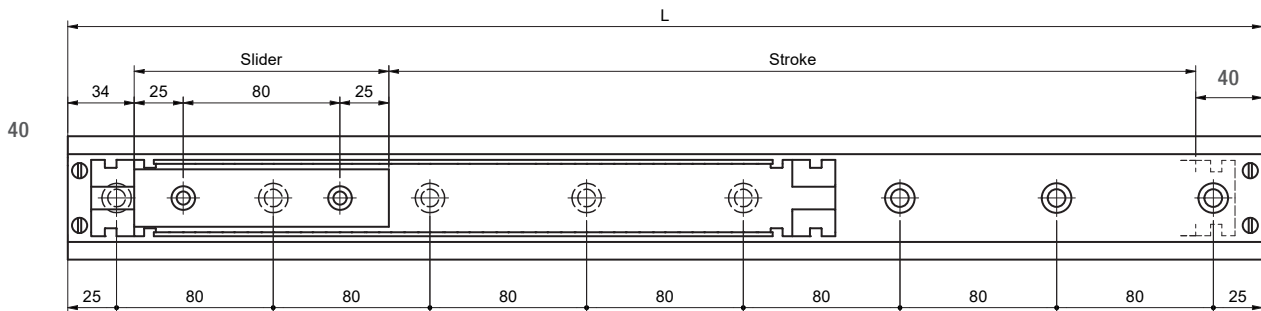
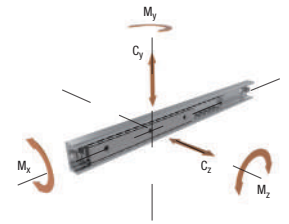
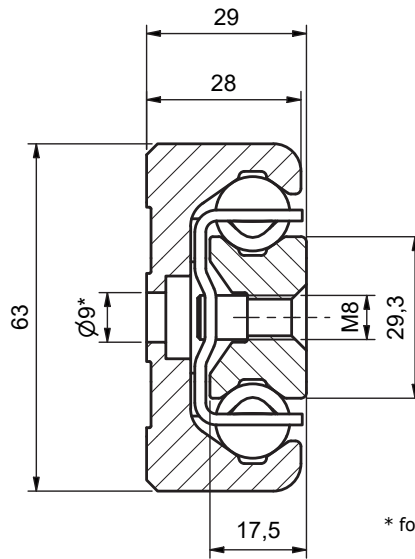
LINEAR GUIDES

NTSF63H

HT4.2

MATERIAL
Zinc-plated steel

L_{min}610 **L_{max}1970**



Rail	Length [mm]
	610 - 690 - 770 - 850 - 930 - 1010 - 1170 - 1330 - 1490 - 1650 - 1810 - 1970

Slider	C _y ¹⁾	C _z ¹⁾	M _x ³⁾	M _y ¹⁾	M _z ¹⁾	C ₁₀₀ ^{1) 2)}
[mm]	[N]		[Nm]	[Nm]		[N]
130	34798	24366	229	284	406	32653
210	57996	40610	382	744	1064	46809
290	81194	56854	534	1422	2030	59302
370	104393	73098	687	2314	3306	70749
450	127591	89342	840	3424	4890	81448
530	150790	105586	992	4750	6786	91573
610	173988	121830	1145	6294	8988	101240

1) C_y, C_z, M_y, M_z and C₁₀₀ = load and torque capacities for pair of rails

2) C₁₀₀ is used for lifetime calculation

3) M_x = torque capacity for single rail

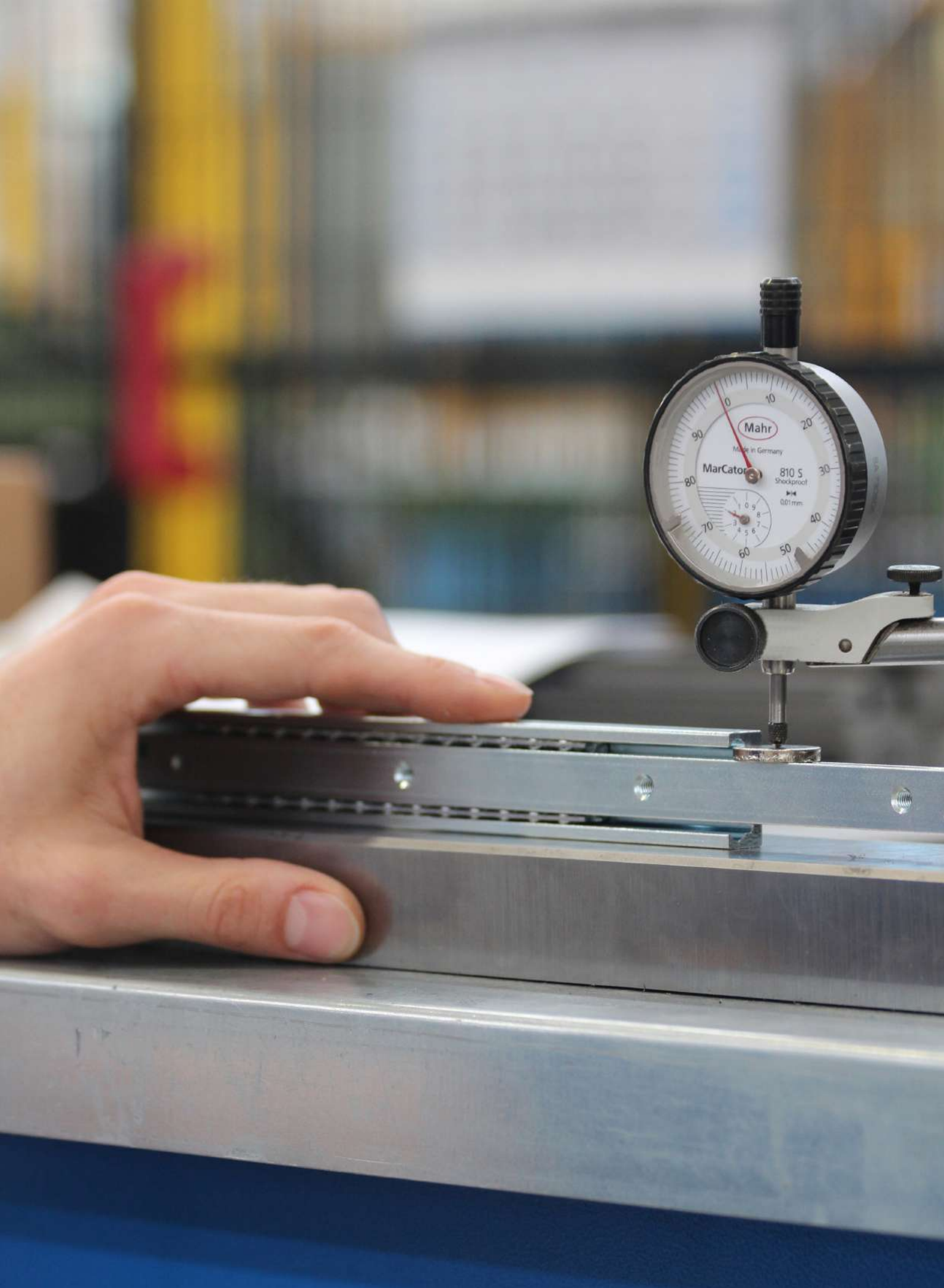
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 43)).

maximum length of 2000 mm.

- Calculate the overall NTSF net weight by using the following formulas:
Slider weight [kg] = 2.90 [kg/m] * slider length [m]
Guide weight [kg] = 6.06 [kg/m] * guide length [m]
Cage weight [kg] = 1.4 [kg/m] * (slider length + stroke/2) [m]
NTSF weight [kg] = slider weight + guide weight + cage weight
- **L = Available lengths [mm]:** 610, 690, 770, 850, 930, 1010, 1170, 1330, 1490, 1650, 1810, 1970. Other lengths are available on request up to a

Code example: **NTSF63H 370 930**

Rail NTSF63H: slider length 370 mm, rail length 930 mm (stroke=480 mm = 930- 370 mm – stop length 2 x 40)



TECHNICAL SPECIFICATIONS

HT5

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HT5.1 NTA-H, NTS-H, NTSF-H, NTVZ-H, NTUZ-H

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HT5.2 APPLICATION CASES

- Component magazine
- Medical technology
- Door rail guide
- Battery pack drawer
- Protective equipment

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HT5.3 PRODUCT MATRIX

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HT5.4 ORDER CODE / OPTIONS

TECHNICAL SPECIFICATIONS

NTA-H, NTS-H, NTSF-H, NTVZ-H, NTUZ-H

Telescopic rails are ball guided slides used when reduced encumbrances are required. Hardened telescopic line is the range of Nadella rails developed for those applications requiring high loads, heavy duty cycles and smooth running.

Thanks to the cold drawn profiles and induction hardened raceways, Nadella Hardened Telescopic Line allows a smoother sliding and a low deflection also for the most exigent applications.

Nadella telescopic rails NTA-H, NTS-H, NTVZ-H and NTUZ-H are respectively available with ~60%, 100% and 150% extension, according to customer needs. Linear guides NTSF-H, using the same optimised profile with hardened raceways, plus an inner slider running inside the rail, provides a linear motion solution for applications demanding compact dimensions and heavy duty dynamics. Our rails are available in size 28, 43 and 63.

STROKE

The extension length values in the catalogue represent the nominal stroke.

The actual stroke can change from $\pm 2\text{mm}$ up to $\pm 10\text{mm}$ depending on the rail type and length. Ask technical department for additional information.

SURFACE TREATMENT

All standard rails are supplied in steel with zinc-plating surface. Other treatments, such as NC4 zinc-nickel alloy coating, are available upon request and can be required as special execution.

LUBRICATION AND TEMPERATURE

To ensure proper operation and to guarantee an adequate lifetime, a lubricant layer must always be provided in the contact area between the balls and the raceways. The guides are normally supplied with barium-soap-based bearing grease, which allows to work in a temperature range between -30°C and $+120^{\circ}\text{C}$. Please contact our technical support if you plan application with higher temperatures. We recommend to lubricate the raceways at least every 50 000 cycles.

The maximum working temperature for rails NTA-H NTS-H NTSF-H is 170°C by using a special grease and reducing the preload during the assembly.

For NTVZ-H and NTUZ-H the temperature is constrained by the rubber stopper at 110°C .

SPEED

The recommended maximum speed is 0,5 m/s in order to have a correct running behaviour (for NTS-H, NTVZ-H and NTUZ-H rails the maximum speed is 0,3 m/s). These products are suggested for applications with small inversion frequencies and accelerations (please, consult the following «Suggestions for a correct mounting» paragraph).

In case of high dynamics applications (speed and loads) we advise to contact our technical support.

LOAD CAPACITIES

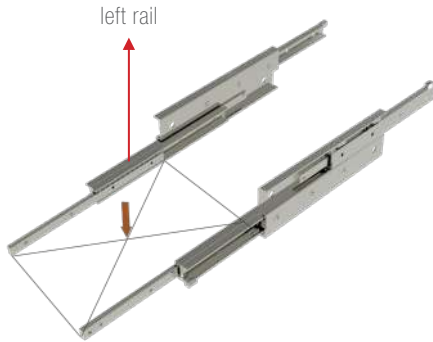
Guide rails with ball cages have preferential load capacities with a side-mounting layout (major axis). The correct mounting assembly is obtained when the guides are placed in parallel with each other, having a uniform distribution of the load. The mounting frame and the drawer must be robust enough to support the load without deformations. When fastening the rails to the support structure, it is always recommended placing class 10.9 screws in all the available holes.



Ideal mounting configuration with two parallel guides, load in preferential direction applied in the middle of the sliders.

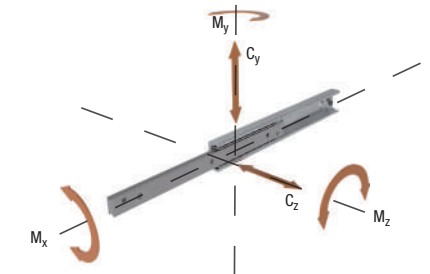
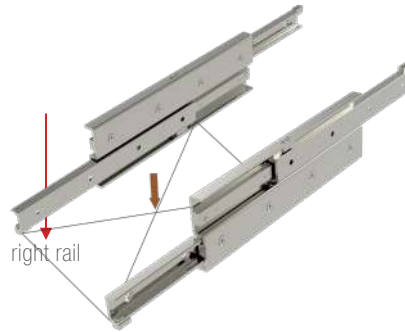
For NTVZ-H and NTUZ-H load must be applied in vertical direction as indicated in the picture, and the loaded drawer has to be connected to the bottom slider.

NTUZ-H



NTUZ-H drawer

NTVZ-H



NTVZ-H drawer

Load capacities are expressed in N (Newton), torque load capacities are expressed in Nm, referred to the Cartesian axes with origin in the centre of the slider.

The load capacities values shown in the tables refer to the pair of rails and are to be intended as maximum static admissible loads for a smooth operation. In order to choose the correct guide rail we suggest to use the product with the appropriate load capacity by calculating the safety factor S_F .

With more loads and torques acting simultaneously in different directions, the check should be done considering the contemporary action of all the components (P_{eq}).

In order to perform static and lifetime checks, consider all the loads acting on a single slider.

OPERATING CONDITIONS	f_s
For high stiffness, low dynamics, low contaminations	1.5
Normal conditions	1.5 - 2
For low stiffness, heavy duty cycle	2 - 3

$$S_F = \left(\frac{C_y'}{P_{eq}} \right) > f_s$$

$$P_{eq} = P_1' + \left(\frac{P_2'}{C_z'} + \frac{M_1'}{M_x} + \frac{M_2'}{M_y} + \frac{M_3'}{M_z} \right) \times C_y'$$

with:

- P_{eq} equivalent load in Y direction resulting from the combination of all the loads and torques acting contemporary on the slider
- P_1' load applied in the middle of the slider in Y direction
- P_2' load applied in the middle of the slider in Z direction
- M_1' torque applied in the middle of the slider around X axis
- M_2' torque applied in the middle of the slider around Y axis
- M_3' torque applied in the middle of the slider around Z axis
- C_y' maximum admissible static load capacity in Y direction
- C_z' maximum admissible static load capacity in Z direction
- M_x maximum admissible static torque load capacity around X axis
- M_y maximum admissible static torque load capacity around Y axis
- M_z maximum admissible static torque load capacity around Z axis
- f_s static factor

C_y' , C_z' , M_y' , M_z' are the load capacity for a single rail and they are equal to the values in the previous tables divided by 2.
For M_x use directly the value written in the previous tables.

LIFETIME

The lifetime of the guide rail is the maximum carried distance (in km for rails NTSF-H) or maximum number of cycles (for rails NTA-H, NTS-H, NTVZ-H, NTUZ-H), that the guide rail will be able to reach before the plastic deformation on the raceways occurs.

For rails NTSF-H:

$$L_{km} = 100 \times \left(\frac{C_{100}'}{P_{eq}} \times \frac{1}{f_d} \right)^3$$

C_{100}' , C_{dyn}' are the load capacity for a single rail and they are equal to the values in the previous tables divided by 2.

OPERATING CONDITIONS	f_d
Smooth operation at low speed at constant load without shocks	1 - 1.2
Smooth operation with load variation	1.2 - 1.5
Operation with small shocks and vibrations	1.5 - 2
High accelerations, shocks and vibrations	2 - 4

For rails NTA-H, NTS-H, NTVZ-H and NTUZ-H:

$$L_{cycles} = 100000 \times \left(\frac{C_{dyn}'}{P_{eq}} \times \frac{1}{f_d} \right)^3$$

with:

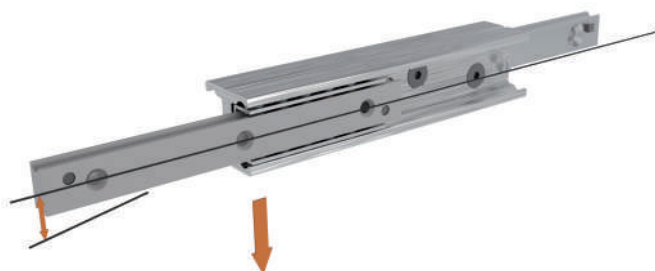
- C_{100}' dynamic load in Y direction [N], for the calculation of the lifetime in km (rails NTSF-H)
- C_{dyn}' dynamic load in Y direction [N], for calculation of the lifetime in cycles (rails NTA-H, NTS-H, NTVZ-H, NTUZ-H)
- P_{eq} equivalent load in Y direction resulting from the combination of all the loads and torques acting contemporary on the slider (see formula above)
- f_d dynamic factor

TECHNICAL SPECIFICATIONS

NTA-H, NTS-H, NTSF-H, NTVZ-H, NTUZ-H

DEFLECTION

The deflection is the elastic deformation you can experience at the edge of the opened rail when a load is applied.



With semi-telescopic rails NTA-H, that can partially exit from the rail, the deflection will depend almost exclusively on the rigidity of the structures connected to the guide elements.

FRICTION COEFFICIENT

The friction coefficient in normal conditions is equal to 0,01. When the movement of the slider is controlled by a drive system, we recommend providing a peak motor torque 10 times higher than the standard required due to the process of displacement (see the "Suggestion for a correct mounting" paragraph). For telescopic rails NTS-H, NTUZ-H, NTVZ-H the required closing force for letting the slider return to the central position is increased by the deflection due to the extraction of the moving elements.

SUGGESTIONS FOR A CORRECT MOUNTING

In ball-cages guide systems, the sliding occurs thanks to the simultaneous movement of the slider and the ball-cage: the slider, moved manually or by a drive system, sets in motion the ball-cage, which will cover half of the stroke done by the slider, until reaching the end-stop. During the running operation, with the succession of working cycles and consequent motion reversals, imperceptible displacements of the ball-cage can occur.

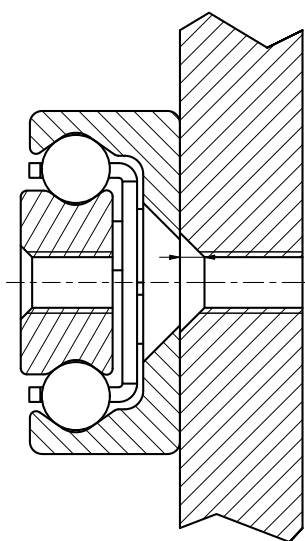
This process, that is defined displacement and leads to a gradual reduction of the stroke and consequent dragging of the ball-cage on the raceways, can be slowed down by limiting speed and acceleration.

The restoration of the proper functioning must be done by setting a forced cycle up to the end stop: when the movement of the slider is commanded by a drive system, we recommend providing a peak motor torque 10 times higher (friction coefficient in normal condition is 0,01).

Guide systems based on ball-cages are mostly recommended for horizontal movements. Vertical installation is not recommended because the ball-cage tends to fall by gravity, emphasizing the process of displacement.

We recommend providing an external end stop in order not to only discharge the arrest of the machine on the stopping screw. The internal end stop are designed to synchronize the cage and inner elements only.

Rails mounted in parallel require good alignment between the 2 sides to avoid internal overload and difficulty in the movement.



Chamfer in the hole of the support

Size	Chamfer (mm)
NTA28, NTSF28, NTVZ84-17H, NTUZ84-30H	1x45°
NTA43, NTSF43, NTVZ120-28H, NTUZ120-50H	1,5x45°
NTA63, NTSF63, NTVZ208-40H, NTUZ208-69H	1x45°

The support on which the guide is mounted needs to have holes with chamfer in order to allow a correct tightening of the countersunk screws.

For each type of telescopic rail, the minimum chamfer is shown in the table above (telescopic rails not present in table do not require chamfer).

HT5.1

Available hole configurations

NTA rails allows to have a complete access to all the fixing holes by removing the screw at the end of the guide profile. Once the telescopic rail is fixed on the support, the screw must be fasten again.

In order to properly mount NTVZ-H and NTUZ-H it is recommended to use all accessible holes without removing any guide component. As indicated in figure below, the orange circles indicate the accessible holes that can be used to fix the guide when completely extended; the red circles highlight the holes that become accessible, once the guide is closed, by using the holes with the orange arrows.

These steps must be performed both on the wall and on the drawer side.



NTVZ-S and NTUZ accessible holes

All the countersunk holes are accessible with no need to open the guide in the double extension.

As indicated in figure below, the orange circles indicate the accessible holes that can be used to fix the guide when completely extended; the red circles highlight the holes that become accessible, once the guide is closed, by using the holes with the orange arrows.

In case of VRM option, please use alle the available holes to fix the guide on the structure.



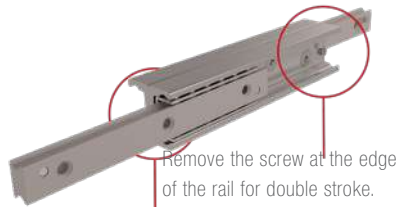
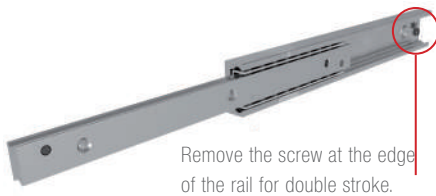
NTS accessible holes

OPTIONS

Double stroke (VR, VRM)

Nadella telescopic rails NTA-H and NTS-H can be delivered with forward and backward extension (or with Double Stroke).

For NTA-H and NTS-H the double stroke functioning can be opted by the customer simply removing the end screw at the edge of the rail or ordering the guide directly with -VR suffix.



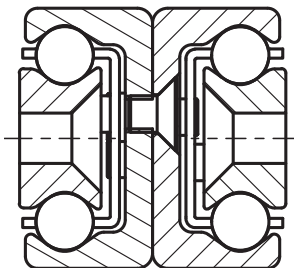
VRM option



For Full-Extension NTS-H, removing the end stop screws may cause the unintentional shifting of the middle beam while moving from backward to forward direction. To prevent this and ensure a synchronized movement of the three elements for double-stroke extensions, please add the -VRM suffix in the ordering code.

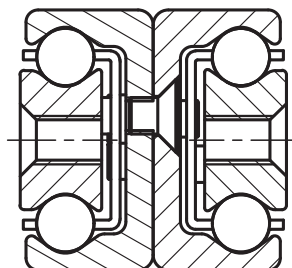
Note that VRM option, due to shortened cage, will have slightly lowered stroke and load capacity compared to the standard NTS.

NTS-H full extensions size 28 and 43 are available with countersunk holes (suffix SS) and threaded holes, or in the mixed version (suffix GS), with one slider with countersunk holes and one slider with threaded holes.



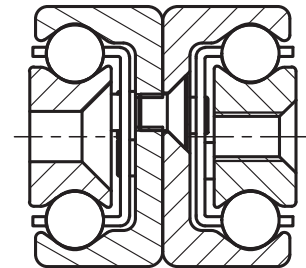
NTS28-26H-...SS
NTS43-44H-...SS

Code example:
NTS28-26H-450 SS, full extension
NTS-H size 28, closed length 450 mm,
countersunk holes in both sliders.



NTS28-26H-...SS
NTS43-44H-...SS

Code example:
NTS43-44H-770, full extension
NTS-H size 43, closed length 770 mm,
threaded holes in both sliders.



NTS28-26H-...GS
NTS43-44H-...GS

Code example:
NTS43-44H-1170-GS, full extension
NTS-H size 43, closed length 1170 mm,
threaded holes on one slider and countersunk holes in
the opposite one.

TECHNICAL SPECIFICATIONS

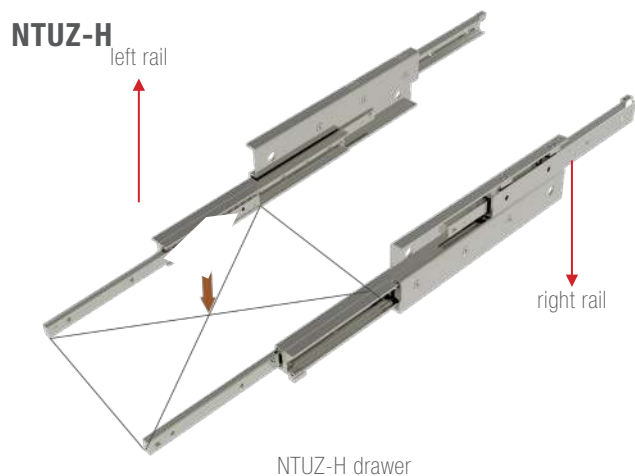
NTA-H, NTS-H, NTSF-H, NTVZ-H, NTUZ-H

NTVZ-H and NTUZ-H VERSIONS

Both single and double stroke version of NTVZ-H can be used indifferently on right or left side of the drawer so it is no needed to specify the mounting side during the product order.

The NTUZ-H type is not symmetrical and, as shown in the figure, there is the guide for the right side and the guide for the left one. During the product order it is important to select the right code present in this catalogue (example: NTUZ84-30H-770-R for right, NTUZ84-30H-770-L for left).

NTVZ-H and NTUZ-H guides must always have the slider where the load is applied on the bottom side.

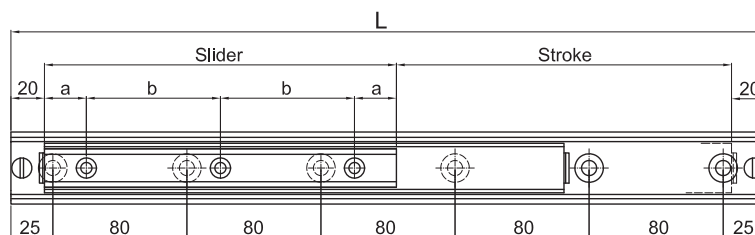


NTSF-H

With NTSF-H linear guides the movement is achieved through one or more sliders which run inside the guide rail. Several different combinations are possible and the final product can be configured out according to the application requests.

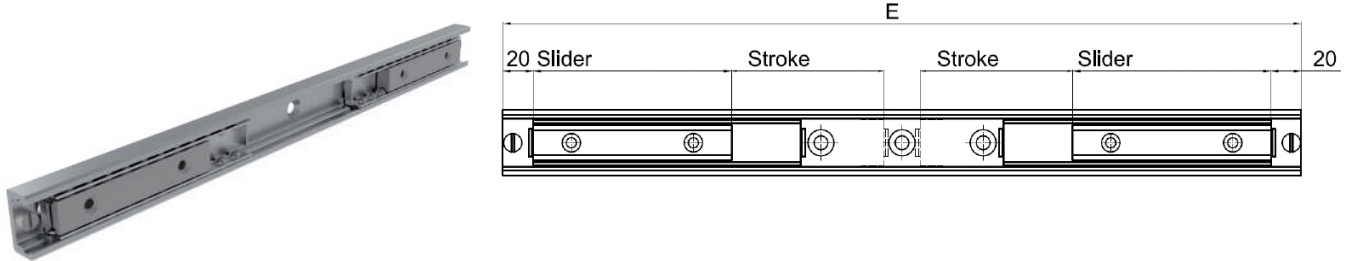
NTSF-H with single slider (STANDARD)

In the standard configuration the final product is composed by the guide rail inside which run a single ball-cage and a single slider.



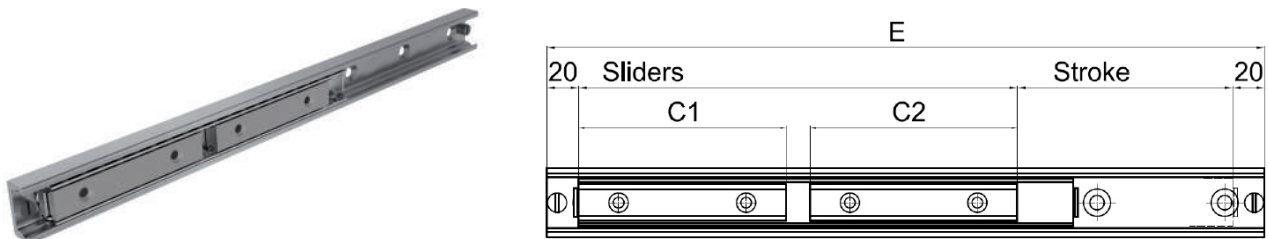
NTSF with two independent sliders (SPECIAL REQUEST)

This configuration allows the movement, inside the guide rail, of two ball-cages, inside each ball-cage one or more sliders.
The two ball-cages can run in opposing directions.



NTSF with two synchronized sliders (SPECIAL REQUEST)

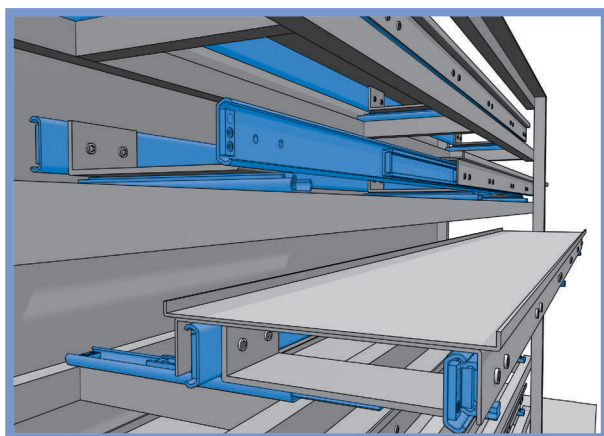
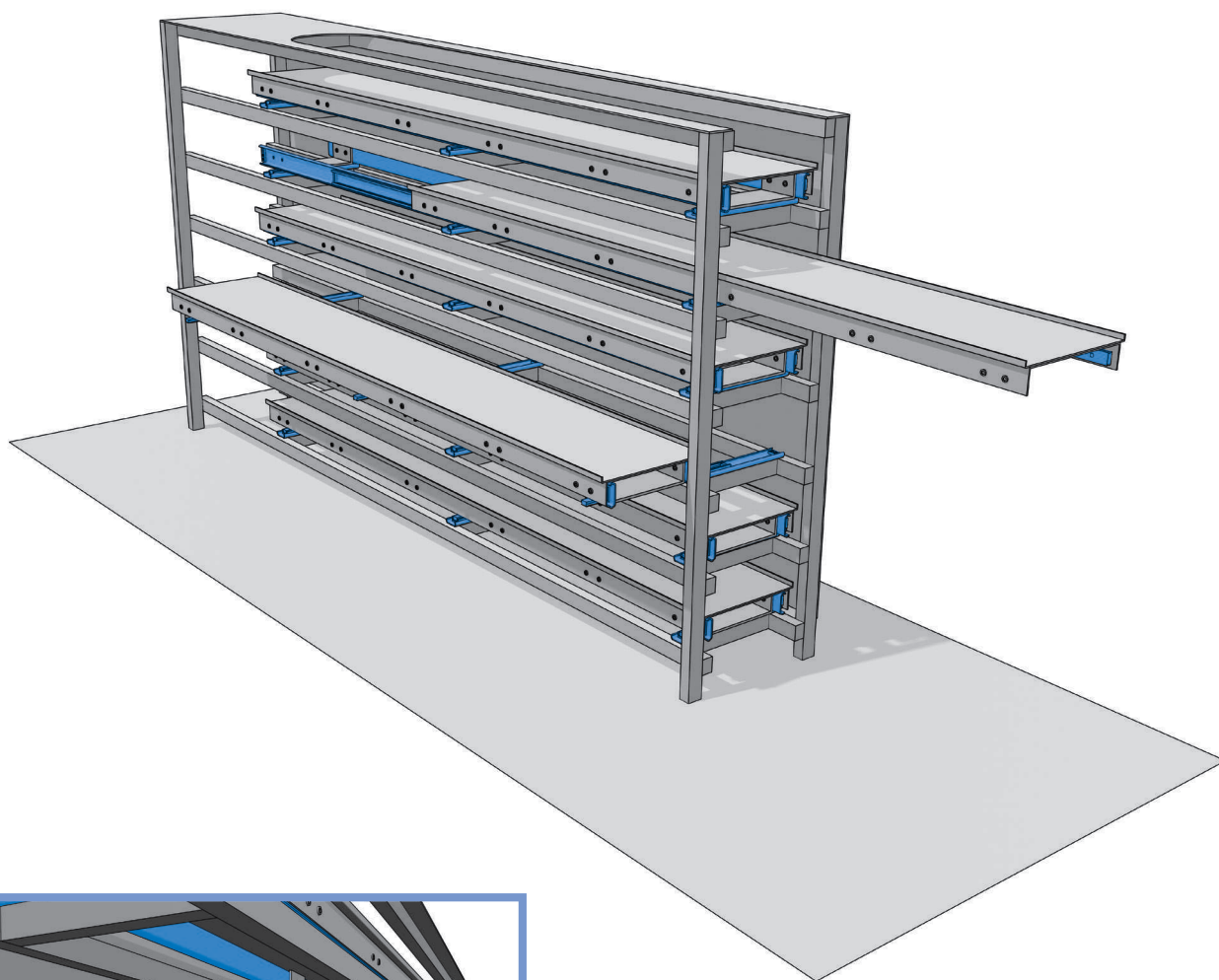
This configuration allows two synchronized sliders to move inside the ball-cage.



TECHNICAL SPECIFICATIONS

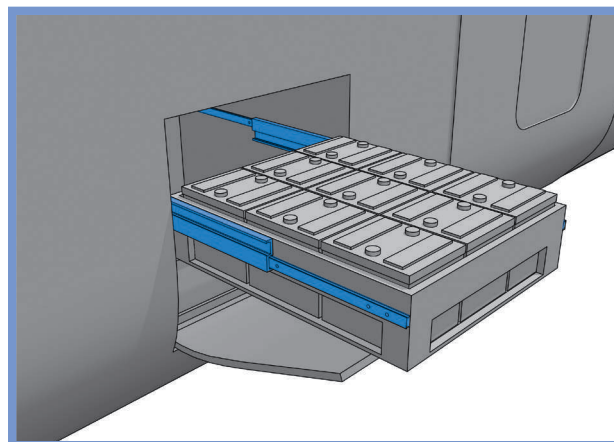
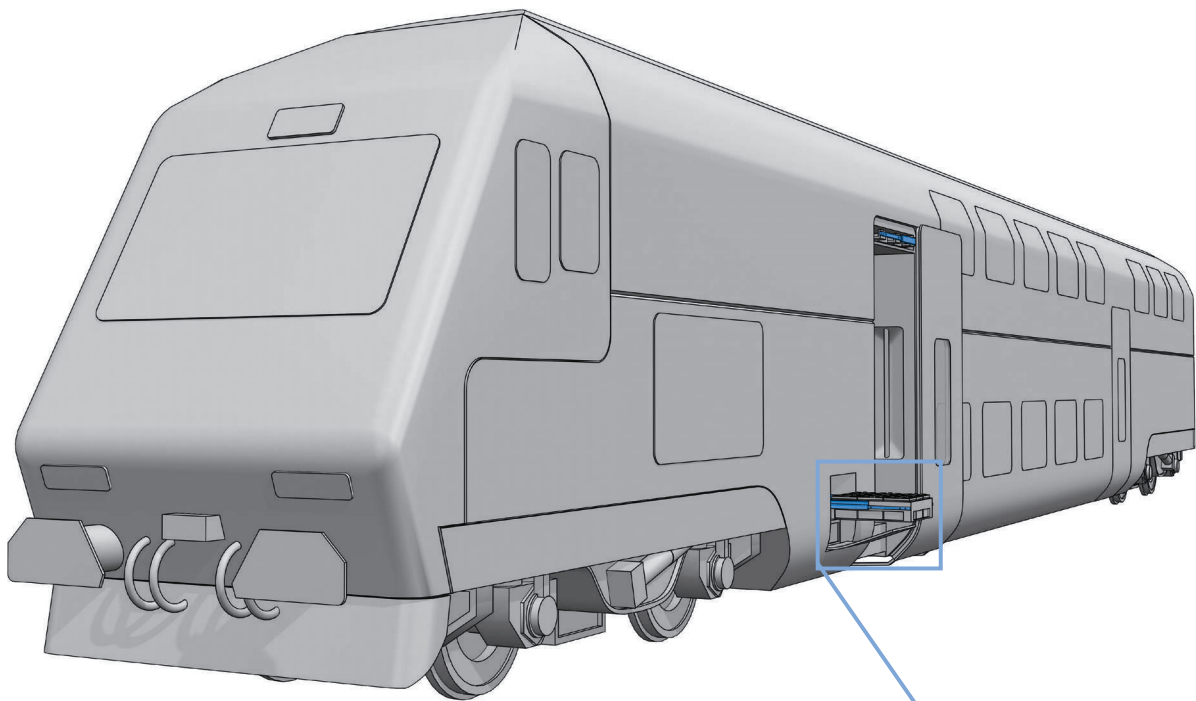
APPLICATION CASES

Application	Automated warehouse
Industry	Automated warehouse
Products	Part-extension (NTA-H)



HT5.2

Application	Door rail guide
Industry	Railway technology
Products	Full Extension (NTVZ-H)



TECHNICAL SPECIFICATIONS

PRODUCT MATRIX

HT5.3

Product group	Designation	Technical Manual			Material					
		L from	L to	Extension length	ST	NC4	VR	VRM	GS	SS
Partial Extension	NTA28-13H	130	1170	~ 60%	x	x	x		x	x
	NTA43-22H	210	1970	~ 60%	x	x	x		x	x
	NTA63-29H	610	1970	~ 60%	x	x	x		x	x
Full Extension	NTS28-26H	130	1170	~ 100%	x	x	x	x	x	x
	NTS43-44H	210	1970	~ 100%	x	x	x	x	x	x
	NTS63-58H	610	1970	~ 100%	x	x	x	x	x	x
	NTVZ84-17H	290	1490	~ 100%	x	x				
	NTVZ120-28H	530	1970	~ 100%	x	x				
	NTVZ208-40H	610	1970	~ 100%	x	x				
Over Extension	NTUZ84-30H	290	1170	~ 150%	x	x				
	NTUZ120-50H	530	1970	~ 150%	x	x				
	NTUZ208-69H	610	1970	~ 150%	x	x				

Legend

L	Installation length
ST	Standard steel with Zinc-Plating
NC4	Zinc-Nickel Plated guide, cursor and cage; stainless steel balls
VR	Double stroke extension
VRM	Double stroke extension with synchronization of inner rails
LL	Smooth-running, for temperature up to 200°C or vertical installation
LS	Increasing clearance, for temperature > 200°C
NZ	Special according to drawing
AZ	"Special extension length (not necessary for standard version) i.e. NTS43-44H-1010-AZ1100 = Extension Length 1100 mm"

TECHNICAL SPECIFICATIONS

ORDER CODE

HT5.2

NTA 28 - 13H - 1000 -

RAIL TYPE

NTA
NTS
NTVZ
NTUZ

INSTALLATION SIZE

H = HARDENED

INSTALLATION LENGTH

OPTIONS

- NZ = Design according to drawing (e.g: customised hole pattern)
- NC4 = Zinc-Nickel Plated profiles and stainless steel AISI420C balls
- VR = Forward and backward extension
- VRM = Forward and backward extension including carrier for inner rail
- AZ = Special extension length (not necessary for standard version)
(E.g.: NTV48-22T-1000-AZ1080 = Extension Length 1080 mm)
- LL = Smooth-running, for temperature up to 200°C or vertical installation
- LS = Increasing clearance, for temperature > 200°C
- GS = Threaded/Countersunk holes
- SS = Countersunk holes on both sides
- S = Single direction stroke
- D = Double direction stroke
- R = Right side mounting
- L = Left side mounting

ORDER CODE LINEAR GUIDE SYSTEM

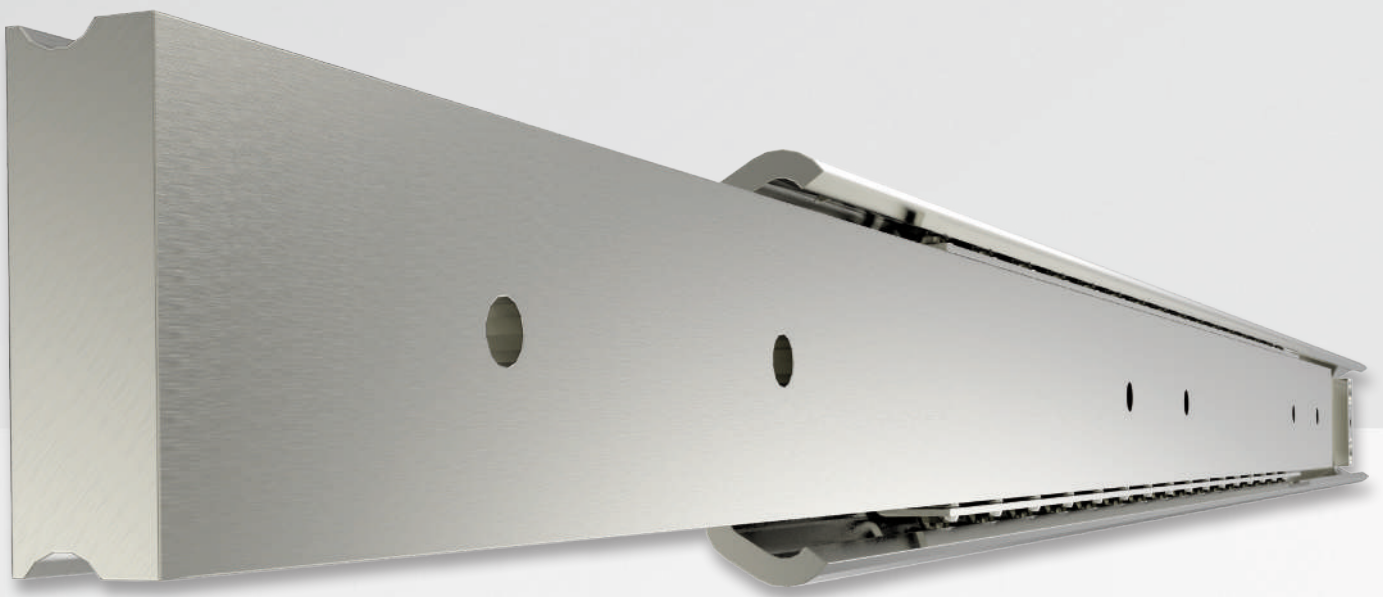
NTSF 28H - 210 - 930

RAIL TYPE

INSTALLATION SIZE

RAIL LENGTH

CARRIAGE LENGTH



TELESCOPIC RAILS

PARTIAL EXTENSION

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TL1.1 PRODUCT OVERVIEW

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TL1.2 PARTIAL EXTENSION

PAGE 57

- NTA40-18.5

PAGE 58

- NTA48-15T

PAGE 59

- NTA50-19.5

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- NTA59-17.5T

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- NTA70-21

PAGE 62

- NTA72-21.5T

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- NTA80-22

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- NTA100-26

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- NTA120-31

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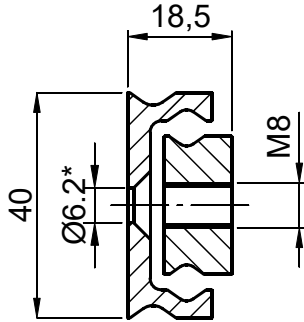
- NTA150-35

PRODUCT OVERVIEW

PARTIAL EXTENSION

NTA40-18.5

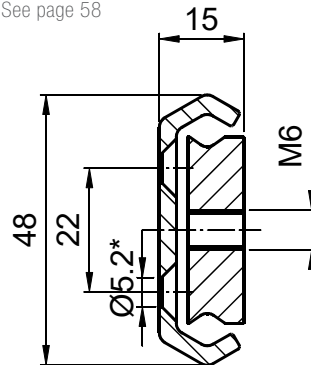
See page 57



* for M6 ISO 10642 screw

NTA48-15T

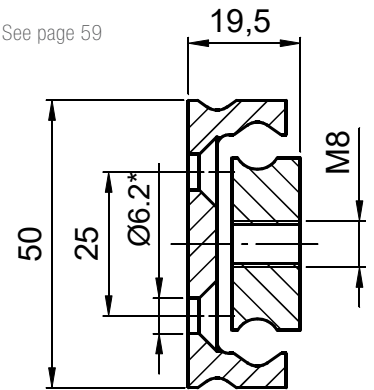
See page 58



* for M5 ISO 10642 screw

NTA50-19.5

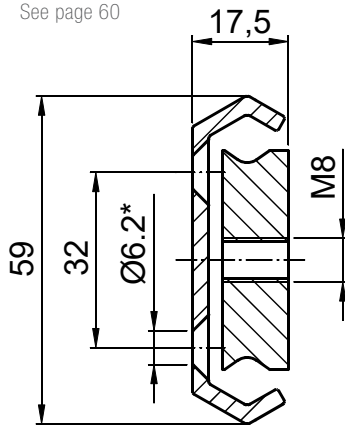
See page 59



* for M6 ISO 10642 screw

NTA59-17.5T

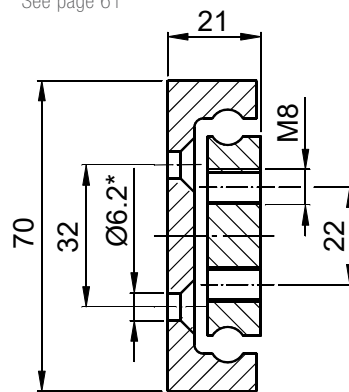
See page 60



* for M6 ISO 10642 screw

NTA70-21

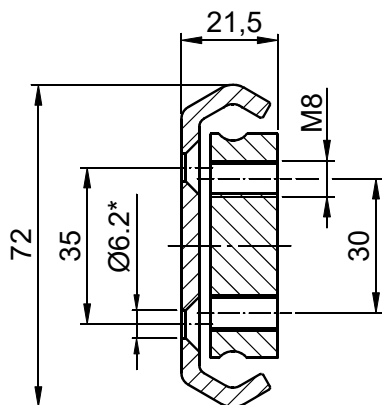
See page 61



* for M6 ISO 10642 screw

NTA72-21.5T

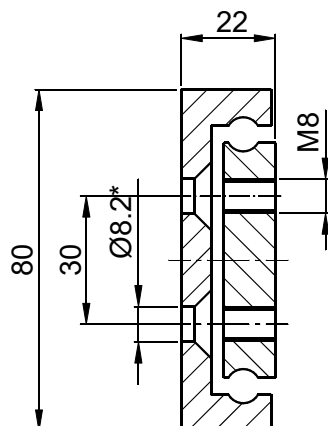
See page 62



* for M6 ISO 10642 screw

NTA80-22

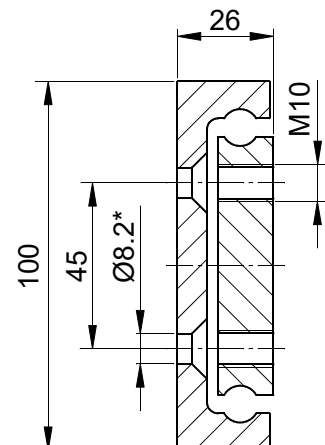
See page 63



* for M8 ISO 10642 screw

NTA100-26

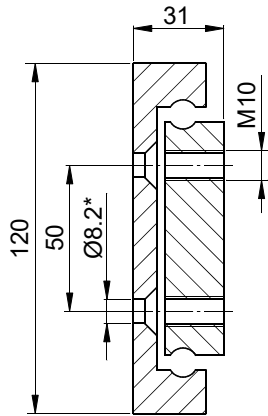
See page 64



* for M8 ISO 10642 screw

NTA120-31

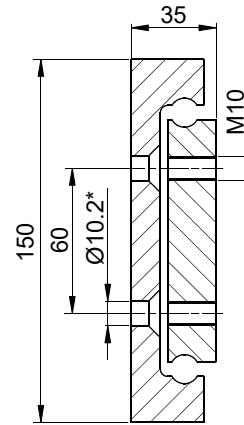
See page 65



* for M8 ISO 10642 screw

NTA150-35

See page 66



* for M10 ISO 10642 screw

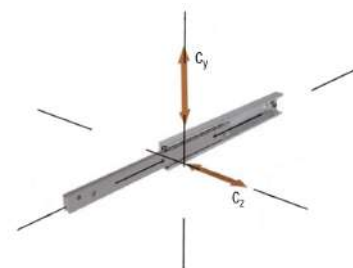
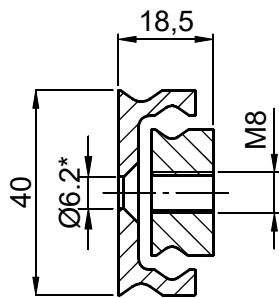
PARTIAL EXTENSION

NTA40-18.5

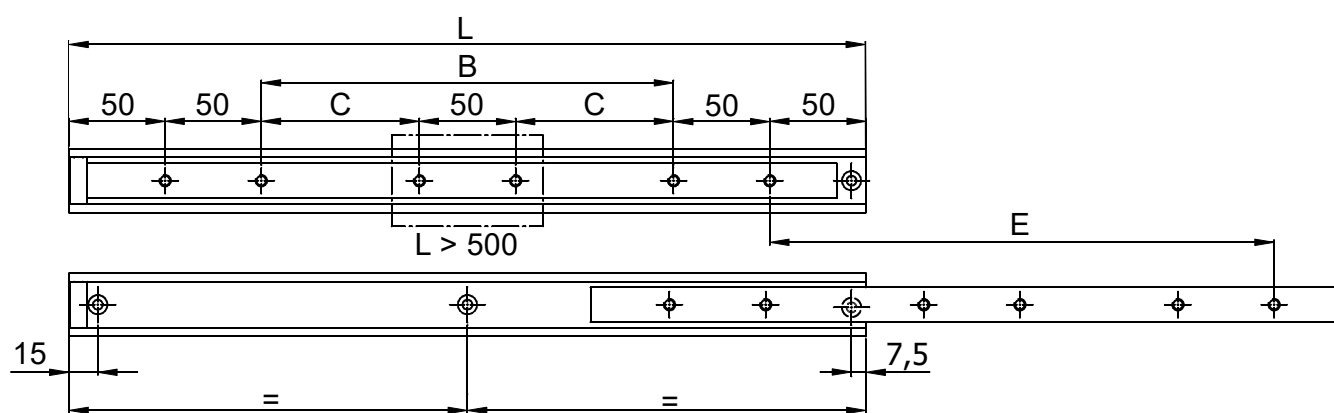
MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}200 **L_{max}1750**



* for M6 ISO 10642 screw



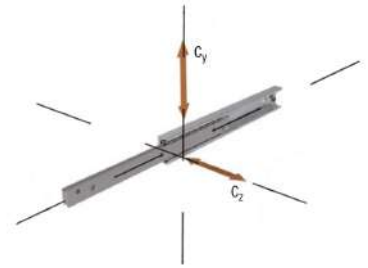
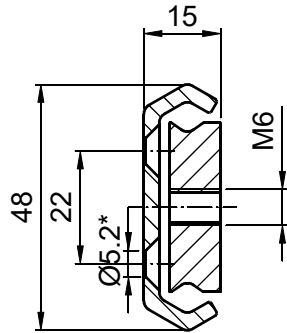
Order Number	Hole Separation		Length [mm]	Extension [mm]	C _y ¹⁾ [N]	C _z ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTA40-18.5-300	100		300	180	2000	1000	1,3
NTA40-18.5-350	150		350	230	2350	1175	1,5
NTA40-18.5-400	200		400	260	2450	1225	1,7
NTA40-18.5-450	250		450	310	2550	1275	1,9
NTA40-18.5-500	300		500	340	2500	1250	2,2
NTA40-18.5-550		150	550	370	2450	1225	2,4
NTA40-18.5-600		175	600	400	2400	1200	2,6
NTA40-18.5-650		200	650	430	2350	1175	2,8
NTA40-18.5-700		225	700	460	2300	1150	3
NTA40-18.5-750		250	750	490	2250	1125	3,2
NTA40-18.5-800		275	800	520	2150	1075	3,5
NTA40-18.5-850		300	850	550	2050	1025	3,7
NTA40-18.5-900		325	900	600	1950	975	3,9
NTA40-18.5-950		350	950	630	1800	900	4,1
NTA40-18.5-1000		375	1000	660	1700	850	4,3
NTA40-18.5-1100		425	1100	720	1600	800	4,7
NTA40-18.5-1200		475	1200	800	1500	750	5,1

- For options or special request please, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

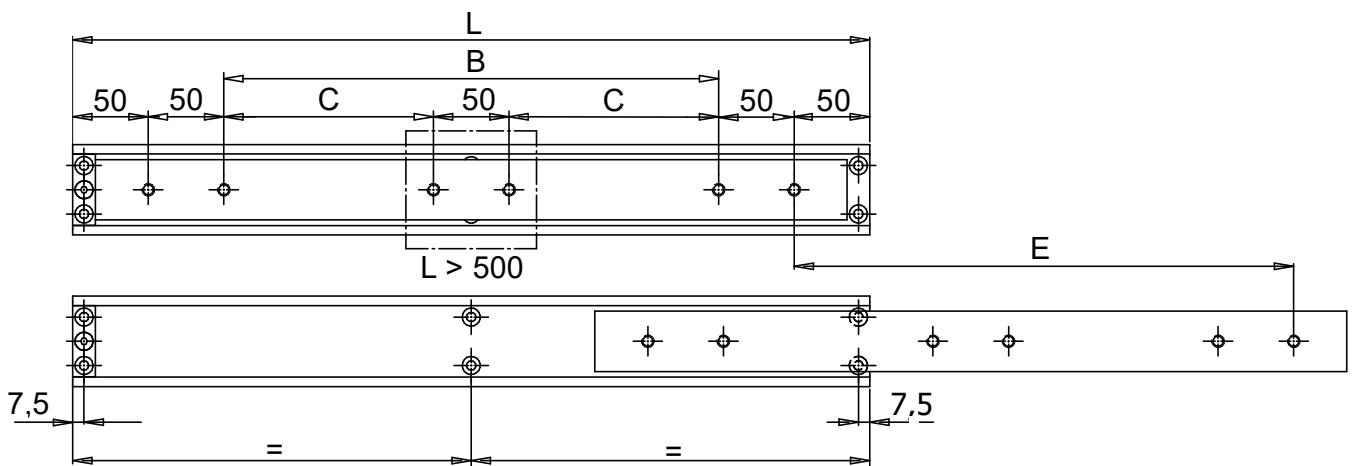
NTA48-15T

MATERIAL
Zinc-plated steel

L_{min}250 **L_{max}1500**



* for M5 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
	100		300	180	1550	775	1
	150		350	230	1650	825	1,2
	200		400	260	1750	875	1,4
	250		450	310	1850	925	1,6
	300		500	340	1800	900	1,8
		150	550	370	1750	875	1,9
		475	600	400	600	300	4,1
		325	650	430	1200	600	3,1
		350	700	460	1100	550	3,3
		375	750	490	1000	500	3,5
		400	800	520	900	450	3,6
		425	850	550	800	400	3,7
		450	900	600	700	350	3,9
		175	950	630	1700	850	2,1
		200	1000	660	1650	825	2,2
		225	1100	720	1600	800	2,4
		250	1200	800	1500	750	2,6

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

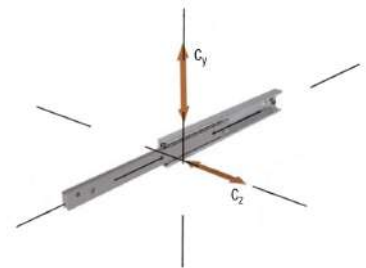
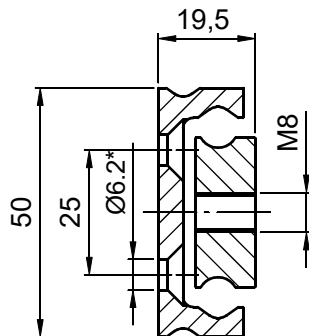
PARTIAL EXTENSION

NTA50-19.5

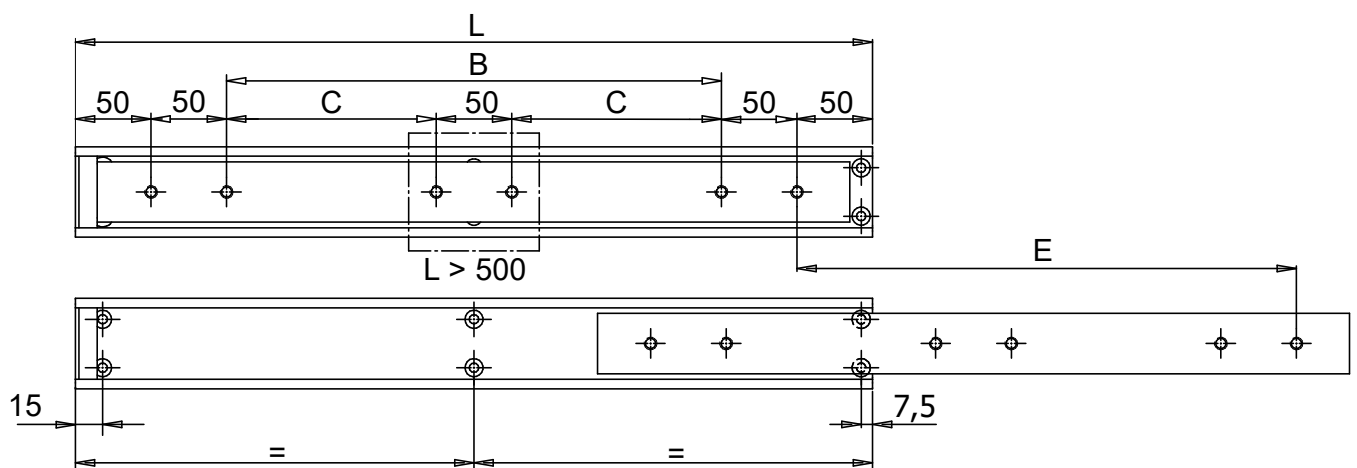
MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}200 **L_{max}2000**



* for M6 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	C _y ¹⁾ [N]	C _z ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTA50-19.5-300	300	100		180	2400	1200	1,7
NTA50-19.5-350	350	150		230	2600	1300	2
NTA50-19.5-400	400	200		260	2700	1350	2,2
NTA50-19.5-450	450	250		310	2800	1400	2,5
NTA50-19.5-500	500	300		340	2900	1450	2,8
NTA50-19.5-550	550		150	370	2850	1425	3,1
NTA50-19.5-600	600		175	400	2800	1400	3,4
NTA50-19.5-650	650		200	430	2700	1350	3,6
NTA50-19.5-700	700		225	460	2600	1300	3,9
NTA50-19.5-750	750		250	490	2500	1250	4,2
NTA50-19.5-800	800		275	520	2400	1200	4,5
NTA50-19.5-850	850		300	550	2300	1150	4,8
NTA50-19.5-900	900		325	600	2200	1100	5,1
NTA50-19.5-950	950		350	630	2100	1050	5,3
NTA50-19.5-1000	1000		375	660	2000	1000	5,6
NTA50-19.5-1100	1100		425	720	1850	925	6,2
NTA50-19.5-1200	1200		475	800	1650	825	6,7

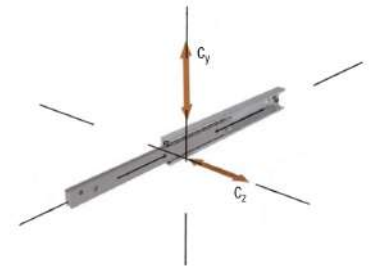
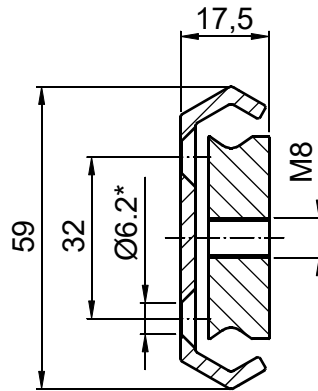
1) C_y and C_z= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

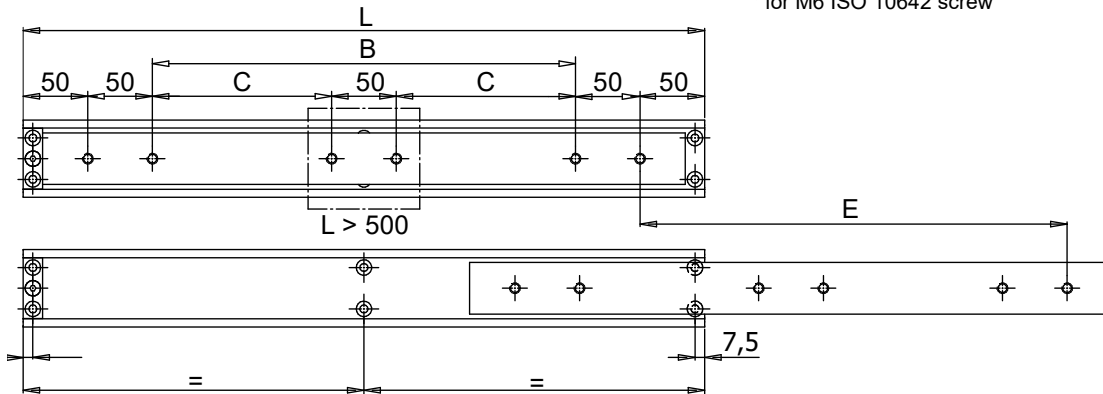
NTA59-17.5T

MATERIAL
Zinc-plated steel

L_{min}250 **L_{max}1750**



* for M6 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTA59-17.5T-300	300	100		180	2250	1125	2.0
NTA59-17.5T-350	350	150		230	2350	1175	2.3
NTA59-17.5T-400	400	200		260	2450	1225	2.6
NTA59-17.5T-450	450	250		310	2550	1275	2.9
NTA59-17.5T-500	500	300		340	2500	1250	3.1
NTA59-17.5T-550	550		150	370	2450	1225	3.6
NTA59-17.5T-600	600		175	400	2400	1200	3.8
NTA59-17.5T-650	650		200	430	2350	1175	4.2
NTA59-17.5T-700	700		225	460	2250	1125	4.5
NTA59-17.5T-750	750		250	490	2150	1075	4.8
NTA59-17.5T-800	800		275	520	2050	1025	5.2
NTA59-17.5T-850	850		300	550	1950	975	5.5
NTA59-17.5T-900	900		325	600	1850	925	5.8
NTA59-17.5T-950	950		350	630	1750	875	6.1
NTA59-17.5T-1000	1000		375	660	1650	825	6.4
NTA59-17.5T-1100	1050		400	690	1550	775	7.1
NTA59-17.5T-1200	1100		425	720	1450	725	7.7
NTA59-17.5T-1300	1150		450	760	1325	663	8.3
NTA59-17.5T-1400	1200		475	800	1200	600	9.0
NTA59-17.5T-1500	1300		525	860	1050	525	9.6

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

PARTIAL EXTENSION

NTA70-21

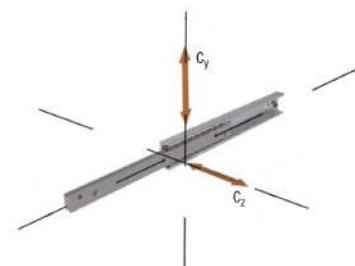
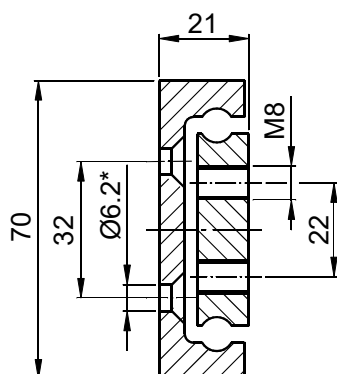
MATERIAL

Zinc-plated steel

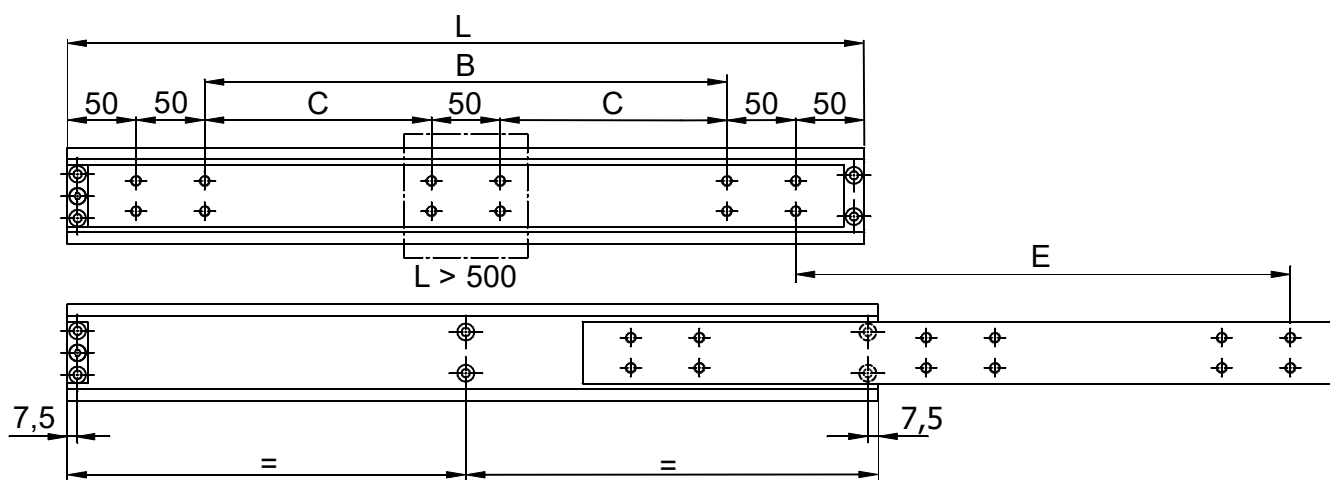
ON REQUEST

Aluminum, AISI 304 or 316 stainless steel

L_{min}300 **L_{max}2250**



* for M6 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTA70-21-500	300		500	300	3700	1850	4.5
NTA70-21-550		150	550	330	3900	1950	5.0
NTA70-21-600		175	600	360	4200	2100	5.5
NTA70-21-650		200	650	390	4150	2075	6.0
NTA70-21-700		225	700	420	4100	2050	6.5
NTA70-21-750		250	750	450	4050	2025	6.9
NTA70-21-800		275	800	480	2400	1200	7.4
NTA70-21-850		300	850	510	2100	1050	7.8
NTA70-21-900		325	900	540	1800	900	8.3
NTA70-21-950		350	950	570	1500	750	8.8
NTA70-21-1000		375	1000	600	3300	1650	9.3
NTA70-21-1100		425	1100	660	3200	1600	10.2
NTA70-21-1200		475	1200	720	3100	1550	11.1
NTA70-21-1300		525	1300	780	3000	1500	12.0
NTA70-21-1400		575	1400	840	2900	1450	12.9
NTA70-21-1500		625	1500	900	2700	1350	13.9
NTA70-21-1600		675	1600	960	4000	2000	14.8
NTA70-21-1700		725	1700	1020	3900	1950	15.7

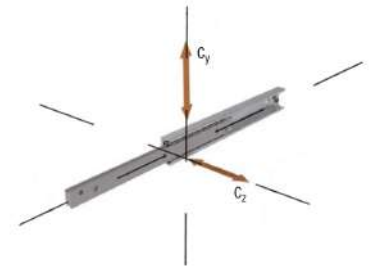
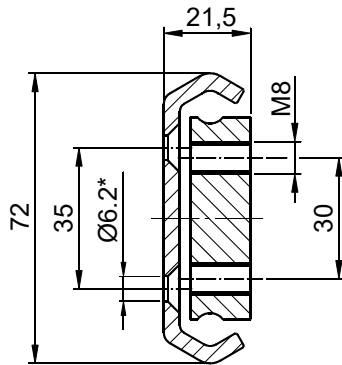
1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

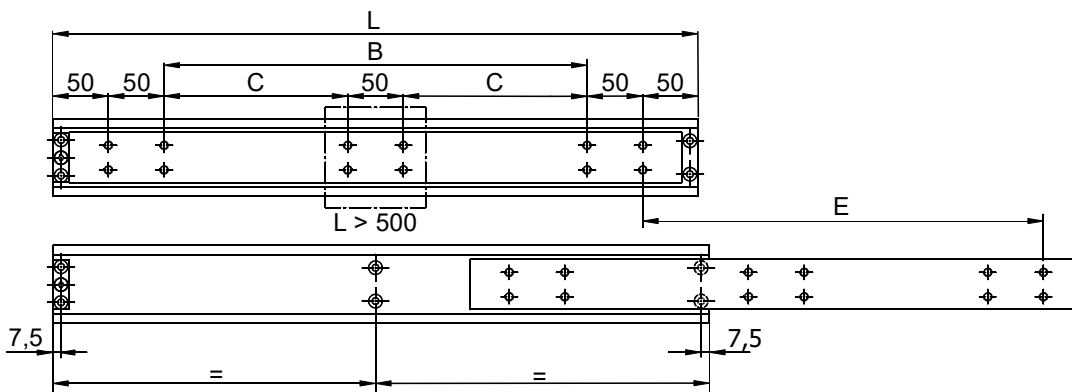
NTA72-21.5T

MATERIAL
Zinc-plated steel

L_{min}350 **L_{max}2000**



* for M6 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	C _y ¹⁾ [N]	C _z ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTA72-21.5T-400	200		400	240	2850	1425	3.2
NTA72-21.5T-450	250		450	270	3000	1500	3.6
NTA72-21.5T-500	300		500	300	2950	1475	4.0
NTA72-21.5T-550		150	550	330	3050	1525	4.5
NTA72-21.5T-600		175	600	360	3000	1500	4.9
NTA72-21.5T-650		200	650	390	2950	1475	5.2
NTA72-21.5T-700		225	700	420	1550	775	5.6
NTA72-21.5T-750		250	750	450	1250	625	6.0
NTA72-21.5T-800		275	800	480	950	475	6.3
NTA72-21.5T-850		300	850	510	750	375	6.8
NTA72-21.5T-900		325	900	540	2550	1275	7.2
NTA72-21.5T-950		350	950	570	2425	1213	7.8
NTA72-21.5T-1000		375	1000	600	2300	1150	8.0
NTA72-21.5T-1100		425	1100	660	2175	1088	8.8
NTA72-21.5T-1200		475	1200	720	2050	1025	9.6
NTA72-21.5T-1300		525	1300	780	1800	900	10.4
NTA72-21.5T-1400		575	1400	840	2900	1450	11.2
NTA72-21.5T-1500		625	1500	900	2850	1425	12.2
NTA72-21.5T-1600		675	1600	960	2800	1400	12.8
NTA72-21.5T-1700		725	1700	1020	2750	1375	13.5

1) C_y and C_z = load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

PARTIAL EXTENSION

NTA80-22

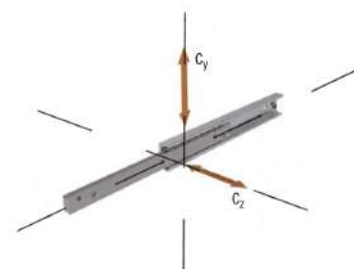
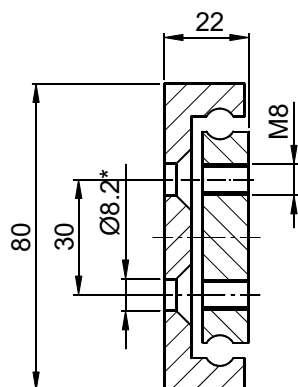
MATERIAL

Zinc-plated steel

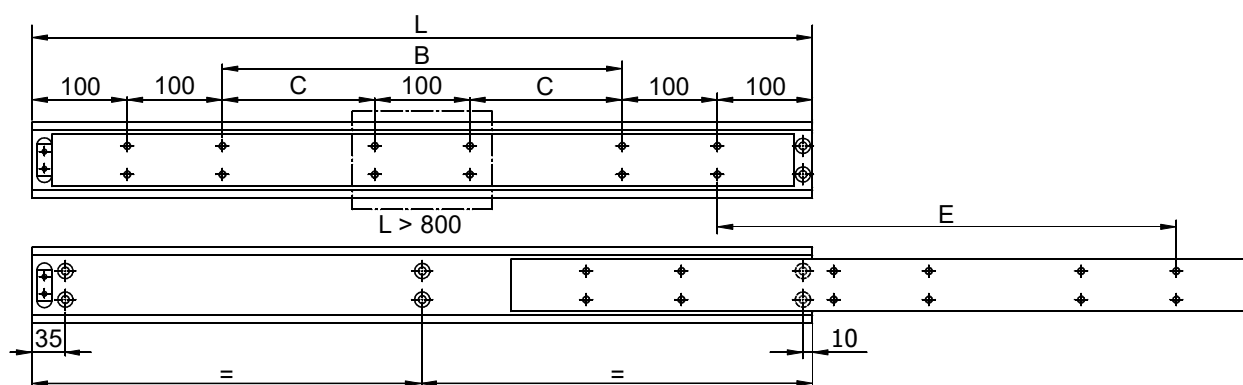
ON REQUEST

Aluminum, AISI 304 or 316 stainless steel

L_{min}350 **L_{max}2500**



* for M8 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTA80-22-500	100		500	300	4800	2400	5.2
NTA80-22-550	150		550	330	4900	2450	5.7
NTA80-22-600	200		600	360	5000	2500	6.2
NTA80-22-650	250		650	390	4900	2450	6.7
NTA80-22-700	300		700	420	4800	2400	7.3
NTA80-22-750	350		750	450	4700	2350	7.7
NTA80-22-800	400		800	480	4600	2300	8.3
NTA80-22-850		175	850	510	4500	2250	8.8
NTA80-22-900		200	900	540	4400	2200	9.3
NTA80-22-950		225	950	570	4250	2125	9.8
NTA80-22-1000		250	1000	600	4100	2050	10.4
NTA80-22-1100		300	1100	660	3800	1900	11.4
NTA80-22-1200		350	1200	720	3500	1750	12.4
NTA80-22-1300		400	1300	780	3200	1600	13.5
NTA80-22-1400		450	1400	840	2900	1450	14.5
NTA80-22-1500		500	1500	900	2600	1300	15.6
NTA80-22-1600		550	1600	960	2300	1150	16.6
NTA80-22-1700		600	1700	1020	2000	1000	17.7

1) Cy and Cz= load capacities for pair of rails

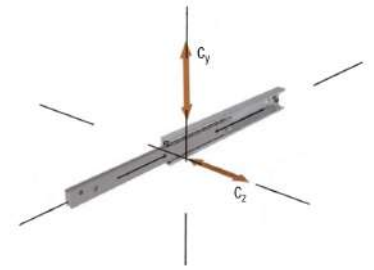
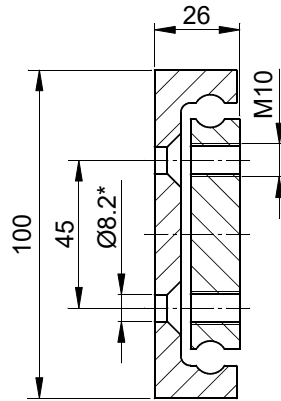
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTA100-26

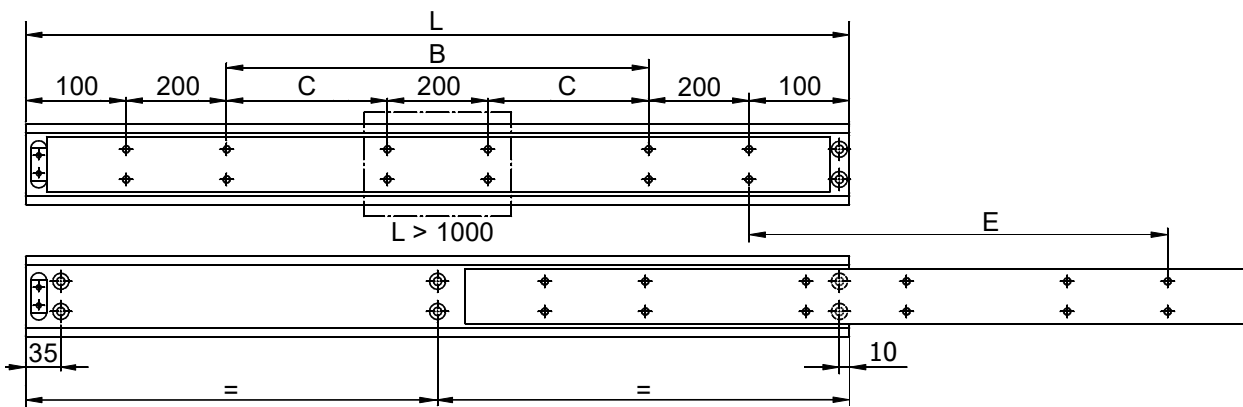
MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

Lmin350 Lmax2750



* for M8 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTA100-26-700	100		700	420	9000	4500	12.0
NTA100-26-750	150		750	450	9500	4750	12.8
NTA100-26-800	200		800	480	10000	5000	13.6
NTA100-26-850	250		850	510	9750	4875	14.0
NTA100-26-900	300		900	540	9500	4750	15.4
NTA100-26-950	350		950	570	9250	4625	16.2
NTA100-26-1000	400		1000	600	9000	4500	17.0
NTA100-26-1100		150	1100	660	8500	4250	18.7
NTA100-26-1200		200	1200	720	8000	4000	20.4
NTA100-26-1300		250	1300	780	7500	3750	22.1
NTA100-26-1400		300	1400	840	6900	3450	27.8
NTA100-26-1500		350	1500	900	6300	3150	25.5
NTA100-26-1600		400	1600	960	5700	2850	27.2
NTA100-26-1700		450	1700	1020	5100	2550	28.9
NTA100-26-1800		500	1800	1080	4500	2550	30.6
NTA100-26-1900		550	1900	1140	3900	1950	32.3
NTA100-26-2000		600	2000	1200	3300	1650	34.0

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page116).

PARTIAL EXTENSION

NTA120-31

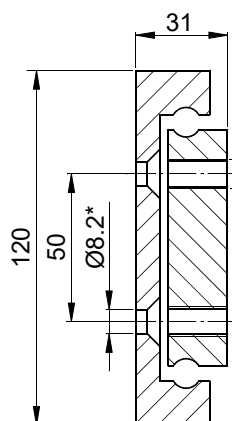
MATERIAL

Zinc-plated steel

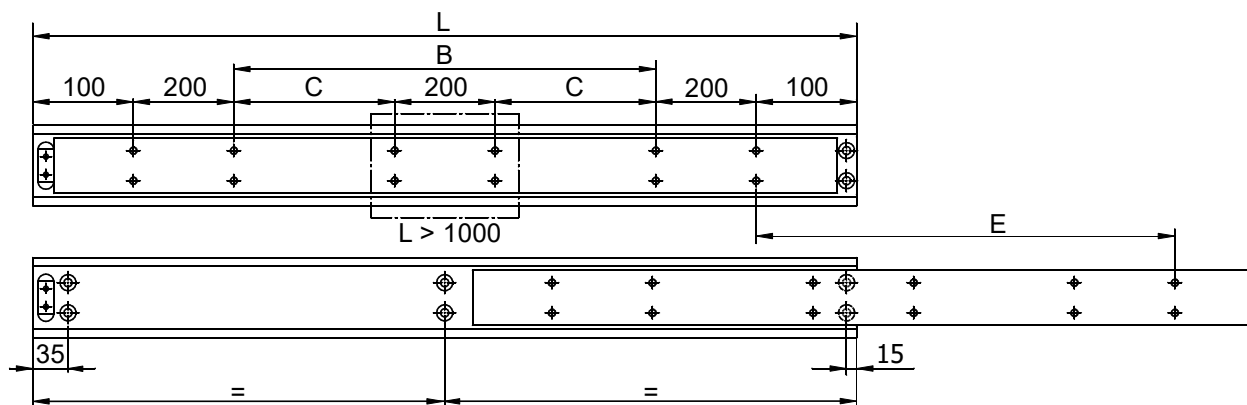
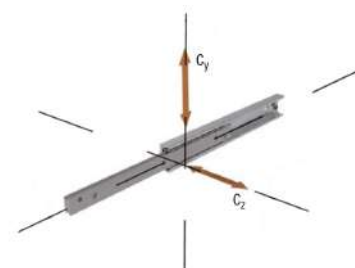
ON REQUEST

Aluminum, AISI 304 or 316 stainless steel

L_{min}400 **L_{max}2750**



* for M8 ISO 1064



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTA120-31-700	100		700	420	11500	5750	16.6
NTA120-31-750	150		750	450	12000	6000	17.8
NTA120-31-800	200		800	480	12000	6000	19.0
NTA120-31-850	250		850	510	12000	6000	20.2
NTA120-31-900	300		900	540	11700	5850	21.4
NTA120-31-950	350		950	570	11400	5700	22.5
NTA120-31-1000	400		1000	600	11000	5500	23.7
NTA120-31-1100		150	1100	660	10800	5400	26.1
NTA120-31-1200		200	1200	720	10300	5150	28.5
NTA120-31-1300		250	1300	780	9800	4900	30.8
NTA120-31-1400		300	1400	840	9300	4650	33.2
NTA120-31-1500		350	1500	900	8700	4350	35,6
NTA120-31-1600		400	1600	960	8100	4050	38.0
NTA120-31-1700		450	1700	1020	7400	3700	40.3
NTA120-31-1800		500	1800	1080	6700	3350	42.7
NTA120-31-1900		550	1900	1140	5700	2850	45.1
NTA120-31-2000		600	2000	1200	4700	2350	47.5
NTA120-31-2100		650	2100	1260	3700	1850	49.4

1) Cy and Cz= load capacities for pair of rails

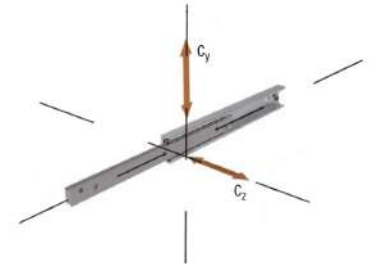
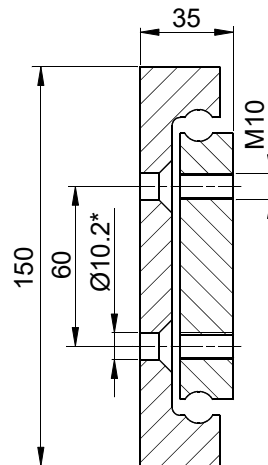
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTA150-35

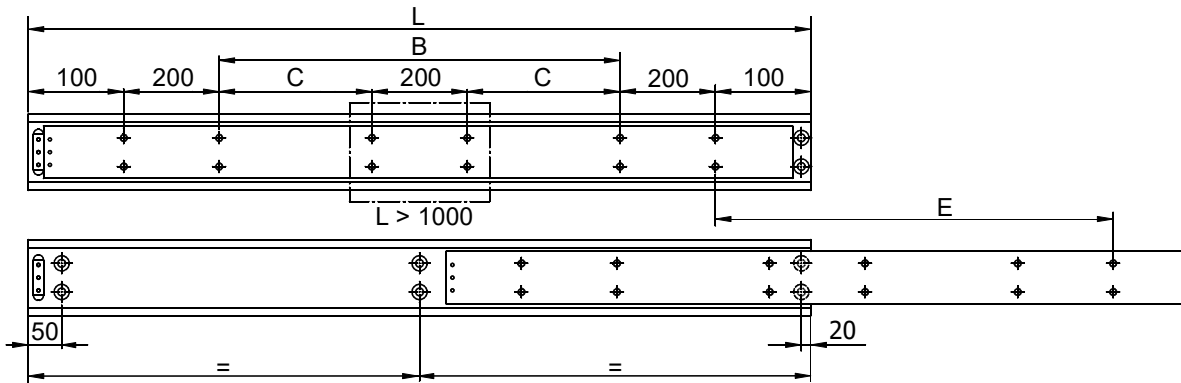
MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}500 **L_{max}3000**



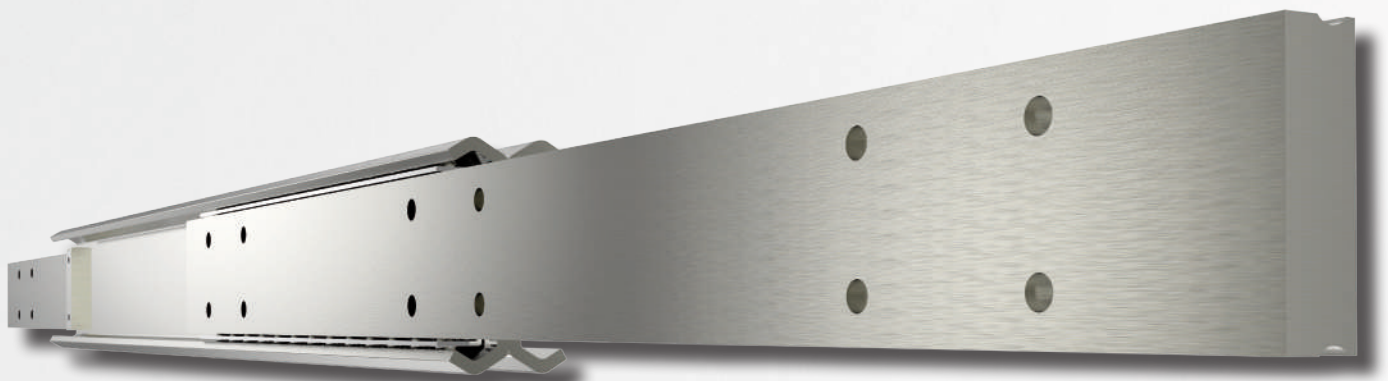
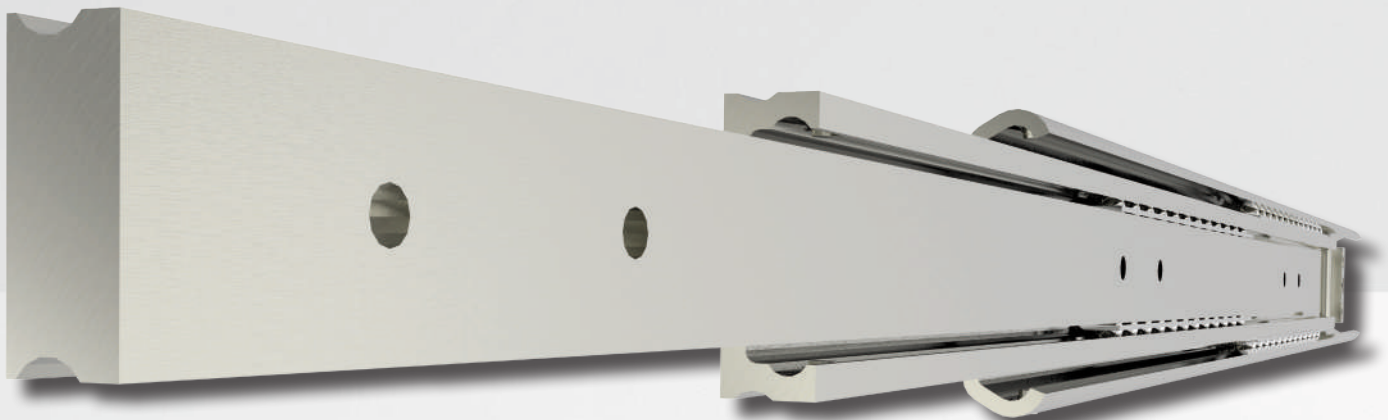
* for M10 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTA150-35-700	100		700	420	14500	7250	24.2
NTA150-35-750	150		750	450	15000	7500	25.9
NTA150-35-800	200		800	480	15500	7750	27.7
NTA150-35-850	250		850	510	15500	7750	29.4
NTA150-35-900	300		900	540	15000	7500	31.1
NTA150-35-950	350		950	570	14750	7375	32.9
NTA150-35-1000	400		1000	600	14500	7250	34.6
NTA150-35-1100		150	1100	660	14100	7050	38.0
NTA150-35-1200		200	1200	720	13300	6650	41.5
NTA150-35-1300		250	1300	780	12500	6250	45.0
NTA150-35-1400		300	1400	840	11700	5850	48.4
NTA150-35-1500		350	1500	900	10900	5450	51.9
NTA150-35-1600		400	1600	960	10000	5000	55.3
NTA150-35-1700		450	1700	1020	9100	4550	58.8
NTA150-35-1800		500	1800	1080	8200	4100	62.3
NTA150-35-1900		550	1900	1140	7300	3650	65.7
NTA150-35-2000		600	2000	1200	6400	3200	69.1
NTA150-35-2100		650	2100	1260	5500	2750	71.9
NTA150-35-2200		700	2200	1320	4500	2250	75.3

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).



FULL EXTENSION

TL2

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TL2.1 PRODUCT OVERVIEW

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TL2.2 FULL EXTENSION

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- NTV48-22T

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- NTV59-24T

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- NTV60-26

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- NTV72-26T

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- NTV72-43DC

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- NTV80-27.5

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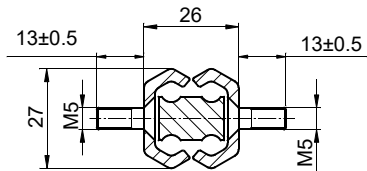
- NTV100-34

PRODUCT OVERVIEW

FULL EXTENSION

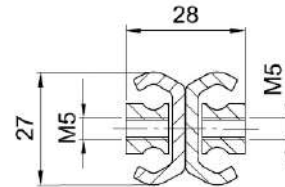
NTV27-26T

See page 71



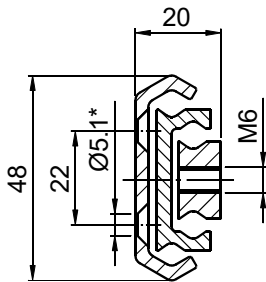
NTV27-28DC

See page 72



NTV48-20T

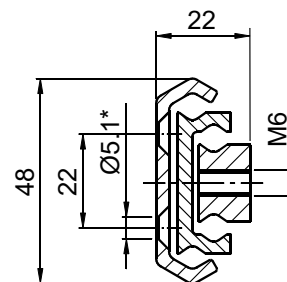
See page 73



* for M5 ISO 10642 screw

NTV48-22T

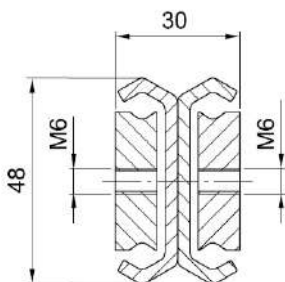
See page 74



* for M5 ISO 10642 screw

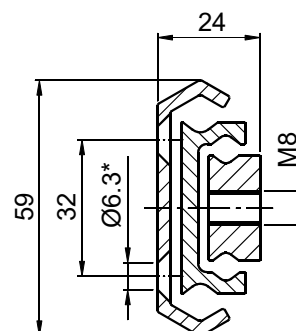
NTV48-30DC

See page 75



NTV59-24T

See page 76

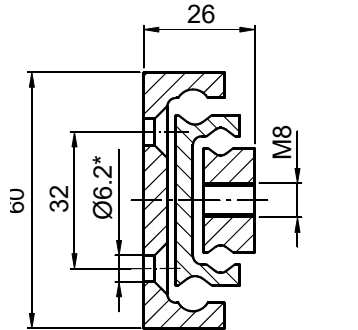


* for M6 ISO 10642 screw

FULL EXTENSION

NTV60-26

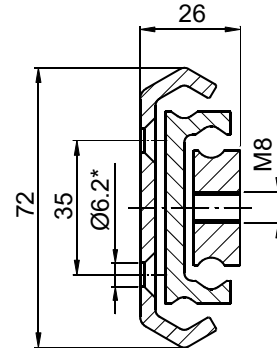
See page 77



* for M6 ISO 10642 screw

NTV72-26T

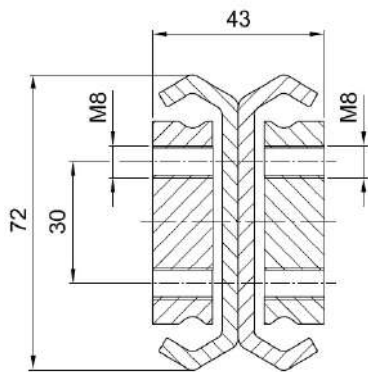
See page 78



* for M6 ISO 10642 screw

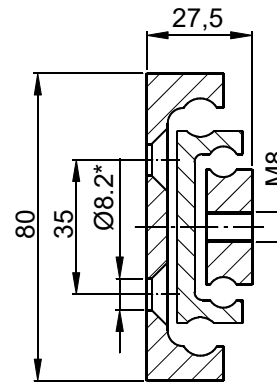
NTV72-43DC

See page 79



NTV80-27.5

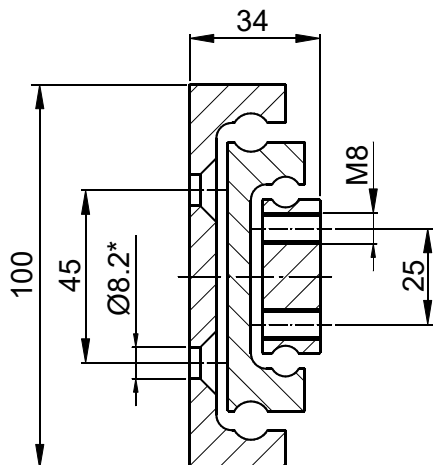
See page 80



* for M8 ISO 10642 screw

NTV100-34

See page 81



* for M8 ISO 10642 screw

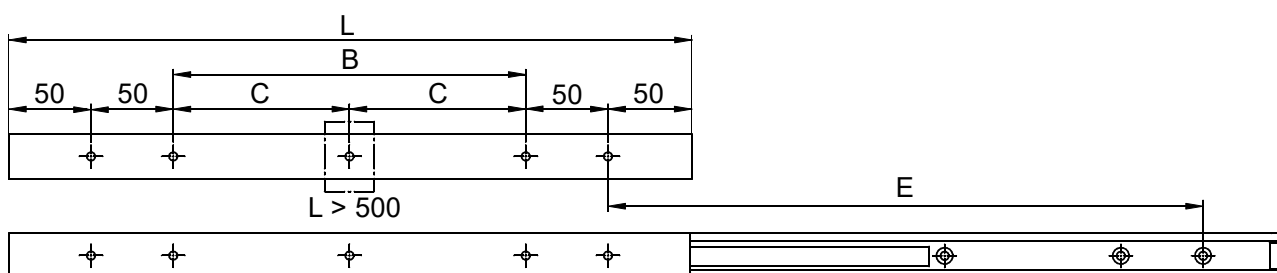
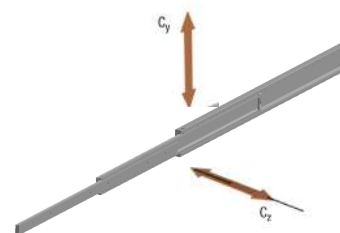
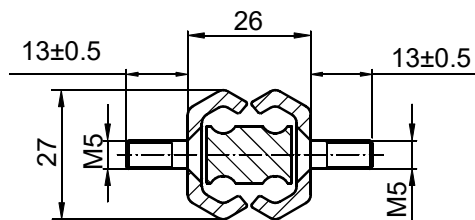
FULL EXTENSION

NTV27-26T

MATERIAL
Zinc-plated steel

SCREWS ARE ENCLOSED

L_{min}200 L_{max}1300



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV27-26T-250	50		250	250	1100	550	1.0
NTV27-26T-300	100		300	300	1150	575	1.2
NTV27-26T-350	150		350	350	1180	590	1.4
NTV27-26T-400	200		400	400	1200	600	1.6
NTV27-26T-450	250		450	450	1180	590	1.8
NTV27-26T-500	300		500	500	1150	575	2.0
NTV27-26T-550		175	550	550	1029	564,5	2.2
NTV27-26T-600		200	600	600	1090	545	2.4
NTV27-26T-650		225	650	650	1060	530	2.6
NTV27-26T-700		250	700	700	1030	515	2.8
NTV27-26T-750		275	750	750	1000	500	3.0
NTV27-26T-800		300	800	800	970	485	3.2
NTV27-26T-850		325	850	850	940	470	3.4
NTV27-26T-900		350	900	900	910	455	3.6
NTV27-26T-950		375	950	950	880	440	3.8
NTV27-26T-1000		400	1000	1000	850	425	4.0
NTV27-26T-1100		450	1100	1100	800	400	4.4
NTV27-26T-1200		500	1200	1200	750	375	4.8
NTV27-26T-1300		550	1300	1300	700	350	5.2

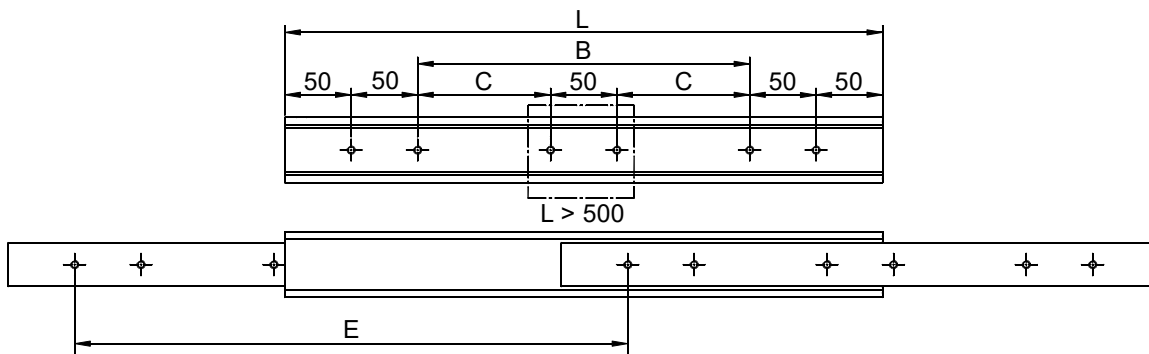
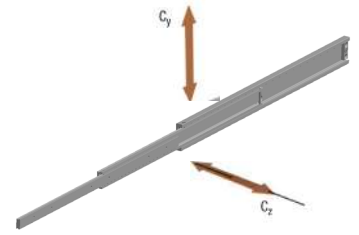
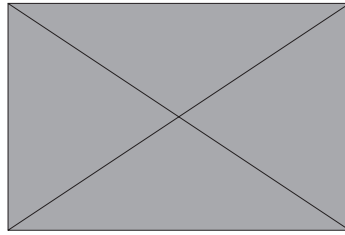
1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTV27-28DC

MATERIAL
Zinc-plated steel

L_{min}200 **L_{max}1000**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV27-28DC-250	50		250	250	750	375	0.9
NTV27-28DC-300	100		300	300	800	400	1.1
NTV27-28DC-350	150		350	350	850	425	1.3
NTV27-28DC-400	200		400	400	800	400	1.5
NTV27-28DC-450	250		450	450	750	375	1.7
NTV27-28DC-500	300		500	500	700	350	1.9
NTV27-28DC-550		150	550	550	650	325	2.0
NTV27-28DC-600		175	600	600	600	300	2.2
NTV27-28DC-650		200	650	650	550	275	2.4
NTV27-28DC-700		225	700	700	500	250	2.6
NTV27-28DC-750		250	750	750	450	225	2.8
NTV27-28DC-800		275	800	800	400	200	3.0
NTV27-28DC-850		300	850	850	370	185	3.2
NTV27-28DC-900		325	900	900	340	170	3.4
NTV27-28DC-950		350	950	950	320	160	3.6
NTV27-28DC-1000		375	1000	1000	300	150	3.8

1) Cy and Cz= load capacities for pair of rails

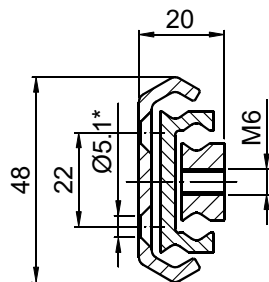
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

FULL EXTENSION

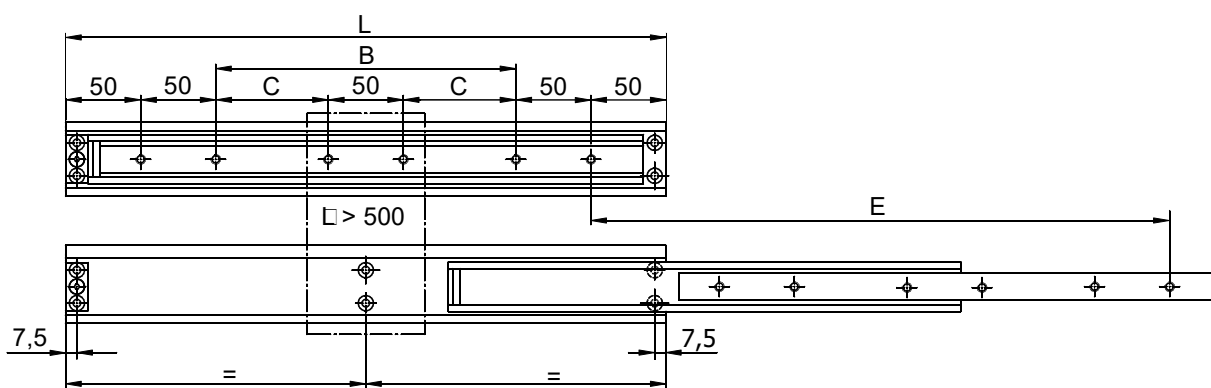
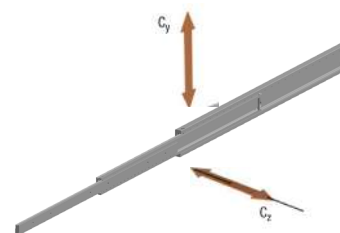
NTV48-20T

MATERIAL
Zinc-plated steel

L_{min}200 **L_{max}1500**



* for M5 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV48-20T-300	100		300	300	1250	625	1.3
NTV48-20T-350	150		350	350	1300	650	1.5
NTV48-20T-400	200		400	400	1300	650	1.7
NTV48-20T-450	250		450	450	1250	625	1.9
NTV48-20T-500	300		500	500	1250	625	2.1
NTV48-20T-550		150	550	550	1200	600	2.3
NTV48-20T-600		175	600	600	1150	575	2.5
NTV48-20T-650		200	650	650	1100	550	2.7
NTV48-20T-700		225	700	700	1050	525	2.9
NTV48-20T-750		250	750	750	1000	500	3.1
NTV48-20T-800		275	800	800	950	475	3.3
NTV48-20T-850		300	850	850	900	450	3.5
NTV48-20T-900		325	900	900	850	425	3.7
NTV48-20T-950		350	950	950	800	400	3.9
NTV48-20T-1000		375	1000	1000	750	375	4.1
NTV48-20T-1100		425	1100	1100	650	325	4.9
NTV48-20T-1200		475	1200	1200	550	275	5.0

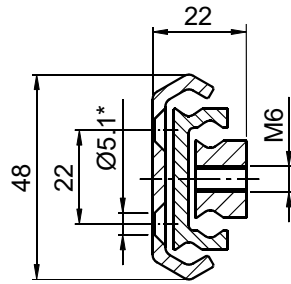
1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

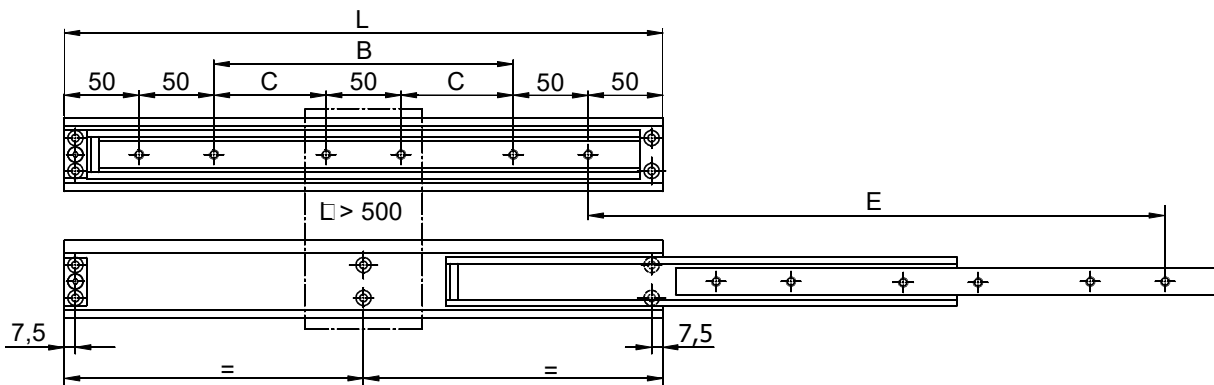
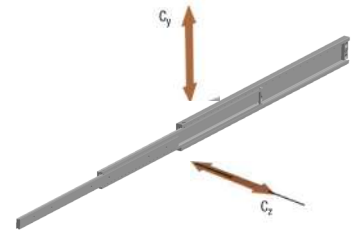
NTV48-22T

MATERIAL
Zinc-plated steel

L_{min}200 **L_{max}1500**



* for M5 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	C _y ¹⁾ [N]	C _z ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV48-22T-300	100		300	300	1410	705	1.4
NTV48-22T-350	150		350	350	1460	730	1.6
NTV48-22T-400	200		400	400	1510	755	1.9
NTV48-22T-450	250		450	450	1460	730	2.1
NTV48-22T-500	300		500	500	1410	705	2.4
NTV48-22T-550		150	550	550	1360	680	2.6
NTV48-22T-600		175	600	600	1310	655	2.9
NTV48-22T-650		200	650	650	1260	630	3.1
NTV48-22T-700		225	700	700	1210	605	3.4
NTV48-22T-750		250	750	750	1160	580	3.6
NTV48-22T-800		275	800	800	1110	555	3.9
NTV48-22T-850		300	850	850	1060	530	4.1
NTV48-22T-900		325	900	900	1010	505	4.4
NTV48-22T-950		350	950	950	960	480	4.6
NTV48-22T-1000		375	1000	1000	910	455	4.9
NTV48-22T-1100		425	1100	1100	810	405	5.4
NTV48-22T-1200		475	1200	1200	710	355	5.9
NTV48-22T-1300		525	1300	1300	610	305	6.4
NTV48-22T-1400		575	1400	1400	510	255	6.9
NTV48-22T-1500		625	1500	1500	410	205	7.4

1) C_y and C_z= load capacities for pair of rails

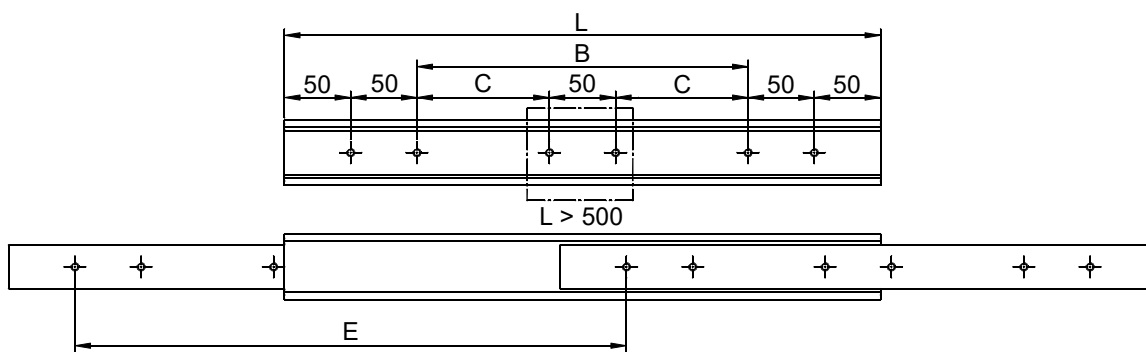
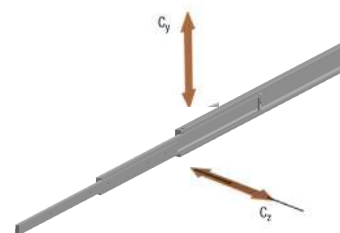
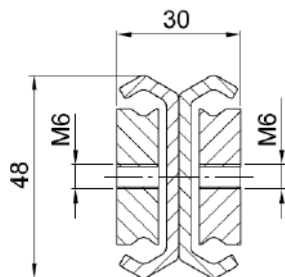
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

FULL EXTENSION

NTV48-30DC

MATERIAL
Zinc-plated steel

L_{min}250 **L_{max}1600**



Order Number	Hole Separation		Length [mm]	Extension [mm]	C _y ¹⁾ [N]	C _z ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV48-30DC-300	100		300	300	10810	905	2.6
NTV48-30DC-350	150		350	350	1.860	930	3.0
NTV48-30DC-400	200		400	400	1.910	955	3.4
NTV48-30DC-450	250		450	450	1.860	930	3.9
NTV48-30DC-500	300		500	500	1.810	905	4.3
NTV48-30DC-550		150	550	550	1.760	880	4.8
NTV48-30DC-600		175	600	600	1.710	855	5.2
NTV48-30DC-650		200	650	650	1.660	830	5.6
NTV48-30DC-700		225	700	700	1.610	805	6.1
NTV48-30DC-750		250	750	750	1.560	780	6.5
NTV48-30DC-800		275	800	800	1.510	755	7.0
NTV48-30DC-850		300	850	850	1.460	830	7.4
NTV48-30DC-900		325	900	900	1.410	705	7.9
NTV48-30DC-950		350	950	950	1.360	680	8.3
NTV48-30DC-1000		375	1000	1000	1.310	655	8.7
NTV48-30DC-1100		425	1100	1100	1.210	605	9.6
NTV48-30DC-1200		475	1200	1200	1.110	555	10.5
NTV48-30DC-1300		525	1300	1300	1.010	505	11.4
NTV48-30DC-1400		575	1400	1400	910	455	12.3
NTV48-30DC-1500		625	1500	1500	810	405	13.2

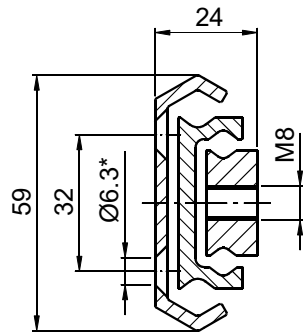
1) C_y and C_z= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

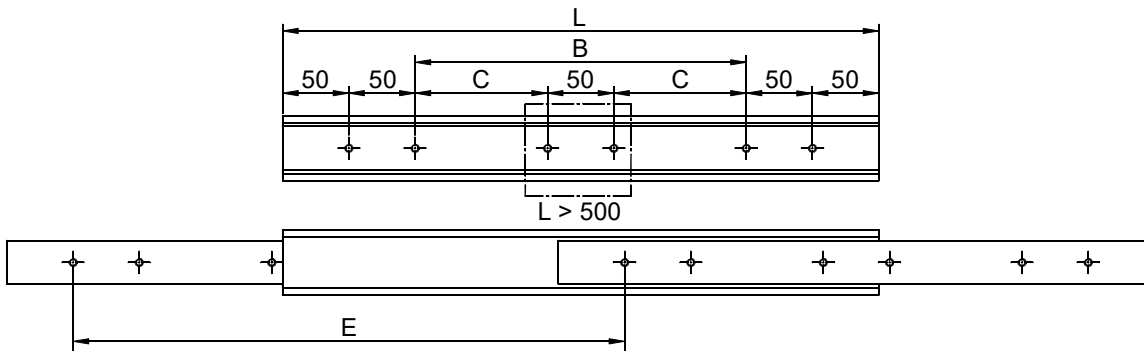
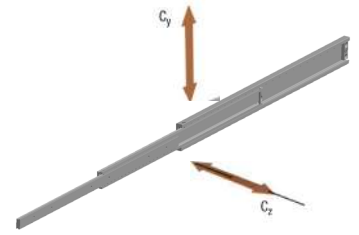
NTV59-24T

MATERIAL
Zinc-plated steel

L_{min}300 **L_{max}2000**



* for M6 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	C _y ¹⁾ [N]	C _z ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV59-24T-300	100		300	300	2100	1050	1.8
NTV59-24T-350	150		350	350	2150	1075	2.4
NTV59-24T-400	200		400	400	2200	1100	2.5
NTV59-24T-450	250		450	450	2150	1075	2.8
NTV59-24T-500	300		500	500	2100	1050	3.1
NTV59-24T-550		150	550	550	2050	1025	3.4
NTV59-24T-600		175	600	600	2000	1000	3.8
NTV59-24T-650		200	650	650	1950	975	4.1
NTV59-24T-700		225	700	700	1900	950	4.4
NTV59-24T-750		250	750	750	1850	925	4.7
NTV59-24T-800		275	800	800	1800	900	5.1
NTV59-24T-850		300	850	850	1750	875	5.4
NTV59-24T-900		325	900	900	1700	850	5.7
NTV59-24T-950		350	950	950	1650	825	6.0
NTV59-24T-1000		375	1000	1000	1600	800	6.4
NTV59-24T-1100		425	1100	1100	1500	750	7.0
NTV59-24T-1200		475	1200	1200	1400	700	7.6
NTV59-24T-1300		525	1300	1300	1300	650	8.4
NTV59-24T-1400		575	1400	1400	1200	600	9.1
NTV59-24T-1500		625	1500	1500	1100	550	9.5

1) C_y and C_z= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

FULL EXTENSION

NTV60-26

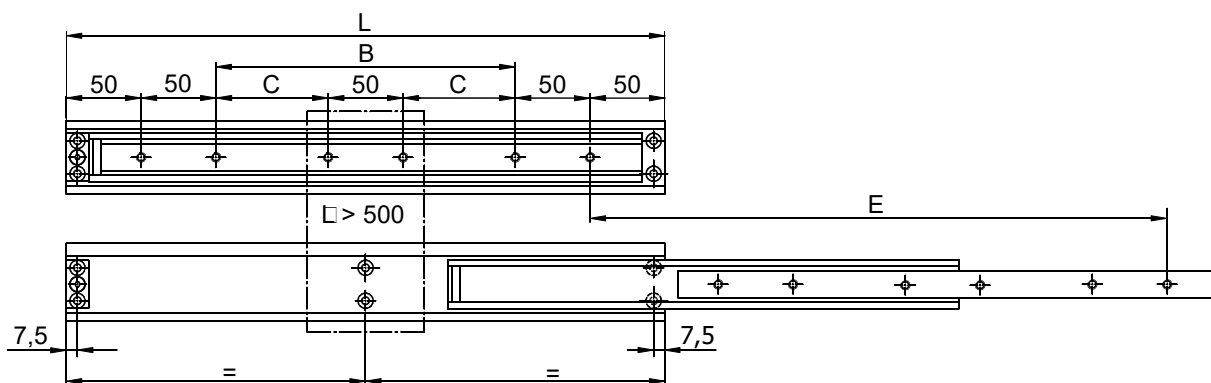
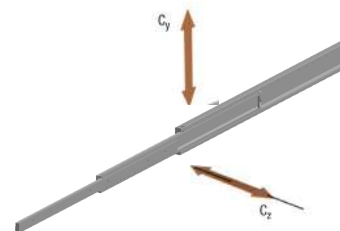
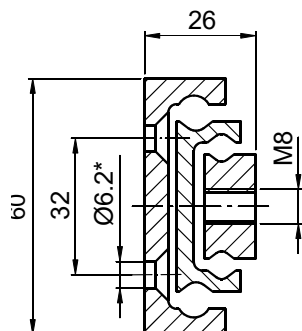
MATERIAL

Zinc-plated steel

ON REQUEST

Aluminum, AISI 304 or 316 stainless steel

L_{min}300 **L_{max}2000**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV60-26-300	100		300	300	2800	1400	1.5
NTV60-26-350	150		350	350	2850	1425	1.8
NTV60-26-400	200		400	400	2900	1450	2.0
NTV60-26-450	250		450	450	2850	1425	2.3
NTV60-26-500	300		500	500	2800	1400	2.5
NTV60-26-550		150	550	550	2800	1400	2.8
NTV60-26-600		175	600	600	2700	1350	3.0
NTV60-26-650		200	650	650	2650	1325	3.3
NTV60-26-700		225	700	700	2600	1300	3.5
NTV60-26-750		250	750	750	2550	1275	3.8
NTV60-26-800		275	800	800	2500	1250	4.0
NTV60-26-850		300	850	850	2450	1225	4.3
NTV60-26-900		325	900	900	2400	1200	4.5
NTV60-26-950		350	950	950	2330	1165	4.8
NTV60-26-1000		375	1000	1000	2250	1125	5.1
NTV60-26-1100		425	1100	1100	2100	1050	5.6
NTV60-26-1200		475	1200	1200	1950	975	6.1
NTV60-26-1300		525	1300	1300	1800	900	6.6
NTV60-26-1400		575	1400	1400	1700	850	7.1
NTV60-26-1500		625	1500	1500	1600	800	7.6

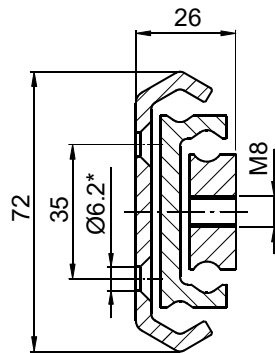
1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

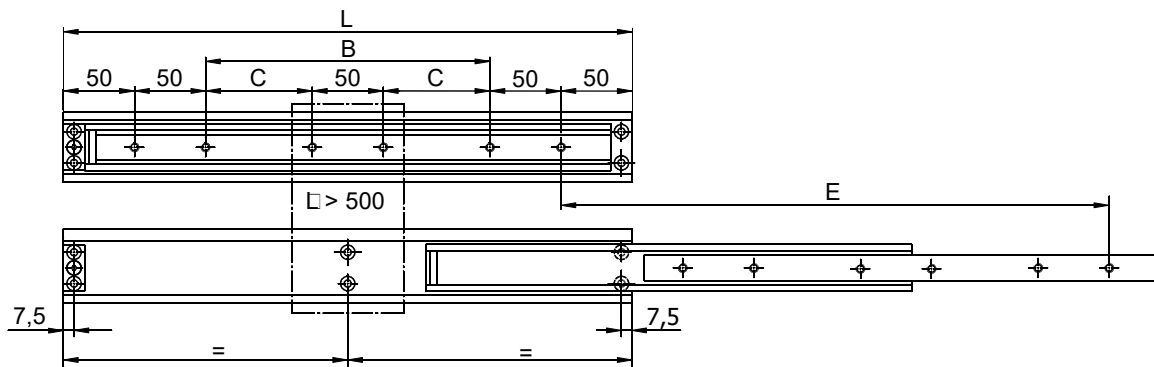
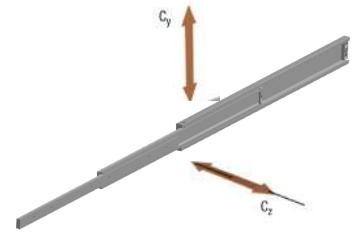
NTV72-26T

MATERIAL
Zinc-plated steel

L_{min}300 **L_{max}2000**



* for M6ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV72-26T-300	100		300	300	3300	1650	2.5
NTV72-26T-350	150		350	350	3350	1675	3.0
NTV72-26T-400	200		400	400	3400	1700	3.5
NTV72-26T-450	250		450	450	3350	1675	4.0
NTV72-26T-500	300		500	500	3300	1650	4.4
NTV72-26T-550		150	550	550	3250	1625	4.9
NTV72-26T-600		175	600	600	3100	1550	5.4
NTV72-26T-650		200	650	650	3150	1575	5.9
NTV72-26T-700		225	700	700	3100	1550	6.3
NTV72-26T-750		250	750	750	3050	1525	6.8
NTV72-26T-800		275	800	800	3000	1500	7.3
NTV72-26T-850		300	850	850	2950	1475	7.7
NTV72-26T-900		325	900	900	2900	1450	8.2
NTV72-26T-950		350	950	950	2850	1425	8.6
NTV72-26T-1000		375	1000	1000	2800	1400	9.1
NTV72-26T-1100		425	1100	1100	2700	1350	10.0
NTV72-26T-1200		475	1200	1200	2600	1300	10.9
NTV72-26T-1300		525	1300	1300	2450	1225	11.9
NTV72-26T-1400		575	1400	1400	2300	1150	12.9
NTV72-26T-1500		625	1500	1500	2150	1075	13.9
NTV72-26T-1600		675	1600	1600	2000	1000	14.7
NTV72-26T-1700		725	1700	1700	1850	925	15.6
NTV72-26T-1800		775	1800	1800	1700	850	16.5
NTV72-26T-1900		825	1900	1900	1550	775	17.5
NTV72-26T-2000		875	2000	2000	1400	700	18.4

1) Cy and Cz= load capacities for pair of rails

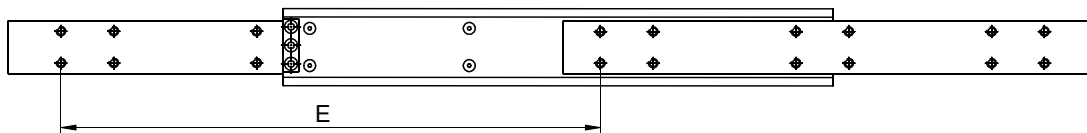
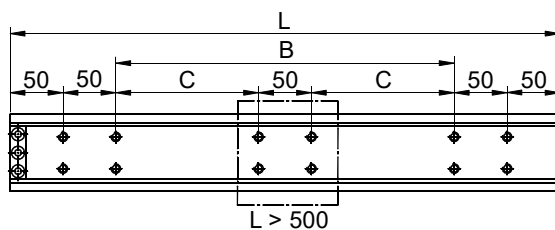
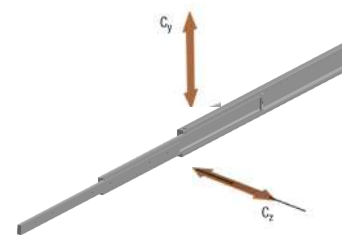
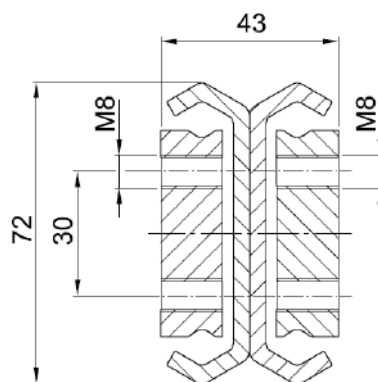
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

FULL EXTENSION

NTV72-43DC

MATERIAL
Zinc-plated steel

L_{min}300 **L_{max}2000**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV72-43DC-300	100		300	300	3800	1900	5.4
NTV72-43DC-350	150		350	350	3850	1925	6.4
NTV72-43DC-400	200		400	400	3900	1950	7.3
NTV72-43DC-450	250		450	450	3850	1925	8.2
NTV72-43DC-500	300		500	500	3800	1900	9.2
NTV72-43DC-550		150	550	550	3750	1875	10.1
NTV72-43DC-600		175	600	600	3700	1850	11.1
NTV72-43DC-650		200	650	650	3650	1825	12.0
NTV72-43DC-700		225	700	700	3600	1800	13.0
NTV72-43DC-750		250	750	750	3550	1775	13.9
NTV72-43DC-800		275	800	800	3500	1750	14.8
NTV72-43DC-850		300	850	850	3450	1725	15.8
NTV72-43DC-900		325	900	900	3400	1700	16.7
NTV72-43DC-950		350	950	950	3350	1675	17.7
NTV72-43DC-1000		375	1000	1000	3300	1650	18.6
NTV72-43DC-1100		425	1100	1100	3200	1600	19.5
NTV72-43DC-1200		475	1200	1200	3100	1550	22.4
NTV72-43DC-1300		525	1300	1300	2950	1475	24.2
NTV72-43DC-1400		575	1400	1400	2800	1400	26.1
NTV72-43DC-1500		625	1500	1500	2650	1325	28.0
NTV72-43DC-1600		675	1600	1600	2500	1250	29.9
NTV72-43DC-1700		725	1700	1700	2300	1150	31.8
NTV72-43DC-1800		775	1800	1800	2100	1050	33.6
NTV72-43DC-1900		825	1900	1900	1900	950	35.5
NTV72-43DC-2000		875	2000	2000	1600	800	37.4

1) Cy and Cz= load capacities for pair of rails

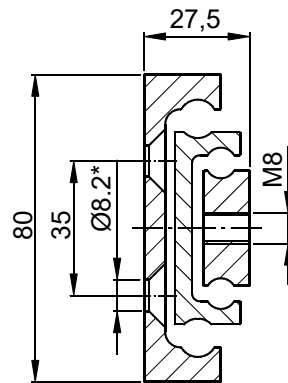
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTV80-27.5

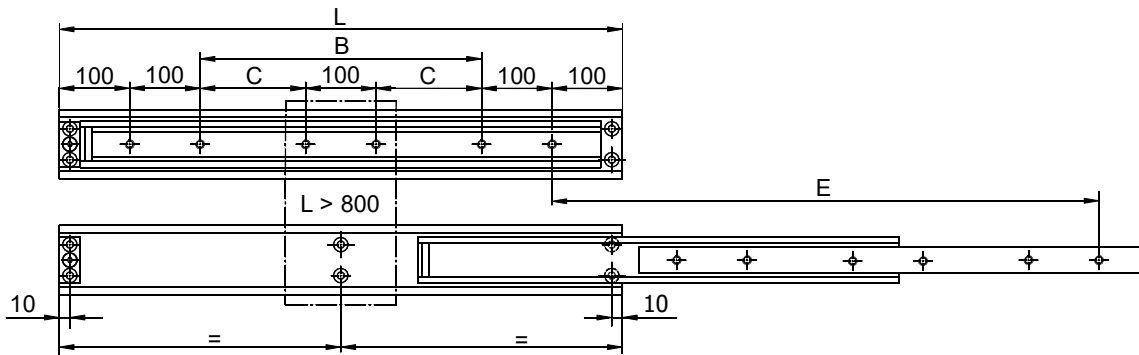
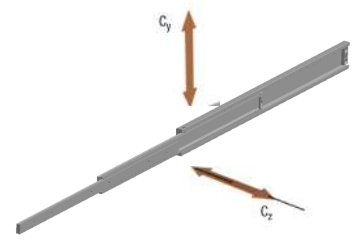
MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

Lmin500 Lmax2250



* for M8 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV80-27.5-500	100		500	500	4350	2175	5.7
NTV80-27.5-550	150		550	550	4400	2200	6.3
NTV80-27.5-600	200		600	600	4450	2225	6.8
NTV80-27.5-650	250		650	650	4450	2225	7.4
NTV80-27.5-700	300		700	700	4450	2225	8.0
NTV80-27.5-750	350		750	750	4400	2200	8.6
NTV80-27.5-800	400		800	800	4350	2175	9.1
NTV80-27.5-850		175	850	850	4300	2150	9.7
NTV80-27.5-900		200	900	900	4200	2100	10.3
NTV80-27.5-950		225	950	950	4100	2050	10.8
NTV80-27.5-1000		250	1000	1000	4000	2000	11.4
NTV80-27.5-1100		300	1100	1100	3800	1900	12.5
NTV80-27.5-1200		350	1200	1200	3600	1800	13.7
NTV80-27.5-1300		400	1300	1300	3350	1675	14.8
NTV80-27.5-1400		450	1400	1400	3100	1550	15.9
NTV80-27.5-1500		500	1500	1500	2800	1400	17.1
NTV80-27.5-1600		550	1600	1600	2500	1250	18.2
NTV80-27.5-1700		600	1700	1700	2250	1125	19.4
NTV80-27.5-1800		650	1800	1800	2000	1000	20.5
NTV80-27.5-1900		700	1900	1900	1750	875	21.6
NTV80-27.5-2000		750	2000	2000	1500	750	22.8

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

FULL EXTENSION

NTV100-34

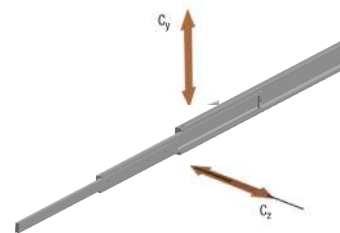
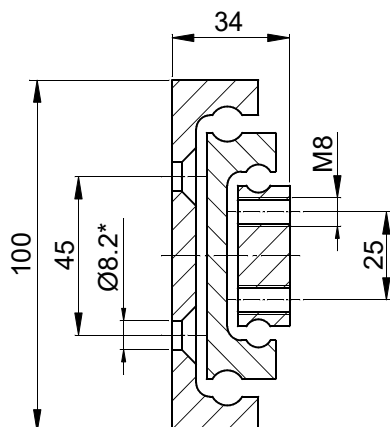
MATERIAL

Zinc-plated steel

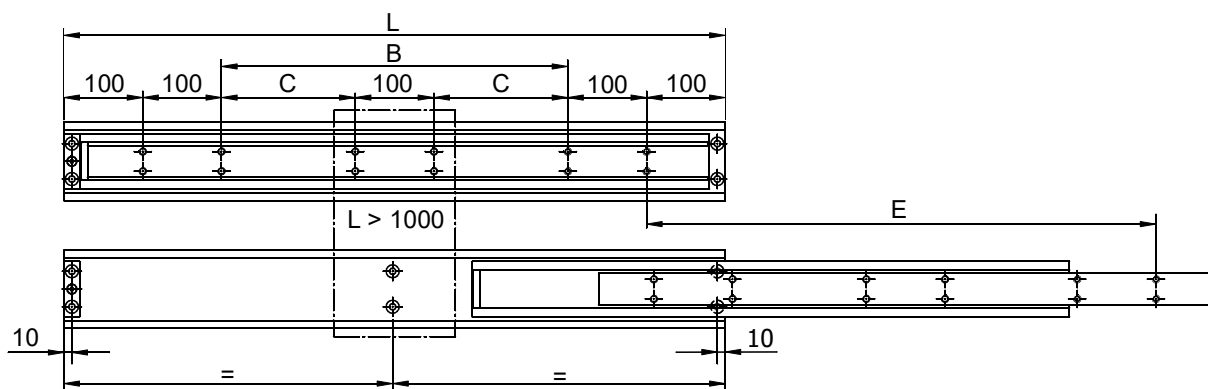
ON REQUEST

Aluminum, AISI 304 or 316 stainless steel

L_{min}500 **L_{max}2500**



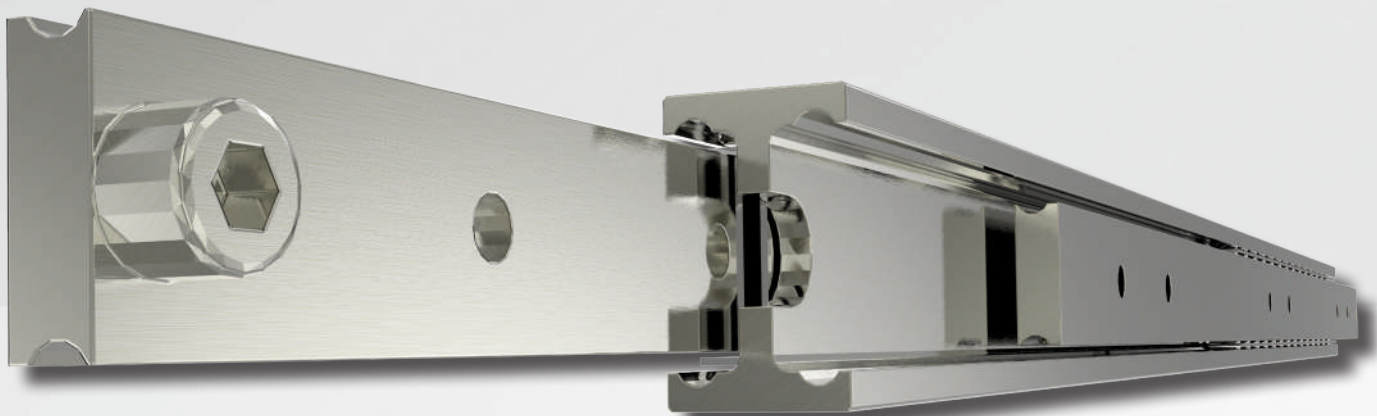
* for M8 ISO 10642 screw



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTV100-34-600	200		600	600	5750	2875	11.2
NTV100-34-650	250		650	650	5650	2825	12.2
NTV100-34-700	300		700	700	5550	2775	13.1
NTV100-34-750	350		750	750	5450	2725	14.0
NTV100-34-800	400		800	800	5350	2675	15.0
NTV100-34-850	450		850	850	5250	2625	15.9
NTV100-34-900	500		900	900	5150	2575	16.8
NTV100-34-950	550		950	950	5050	2525	17.8
NTV100-34-1000	600		1000	1000	4950	2475	18.7
NTV100-34-1100		300	1100	1100	4750	2375	20.6
NTV100-34-1200		350	1200	1200	4550	2275	22.5
NTV100-34-1300		400	1300	1300	4300	2150	24.3
NTV100-34-1400		450	1400	1400	4050	2025	26.2
NTV100-34-1500		500	1500	1500	3800	1900	28.1
NTV100-34-1600		550	1600	1600	3550	1775	29.9
NTV100-34-1700		600	1700	1700	3300	1650	31.8
NTV100-34-1800		650	1800	1800	3050	1525	33.7
NTV100-34-1900		700	1900	1900	2750	1375	35.6
NTV100-34-2000		750	2000	2000	2450	1225	37.4

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).



FULL EXTENSION

HEAVY LOAD

TL3

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TL3.1 PRODUCT OVERVIEW

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TL3.2 FULL EXTENSION

HEAVY LOAD

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• NTS100-44

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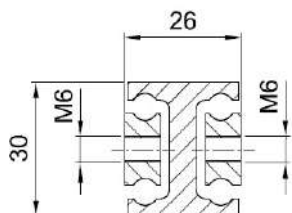
• NTS200-72

PRODUCT OVERVIEW

FULL EXTENSION | HEAVY LOAD

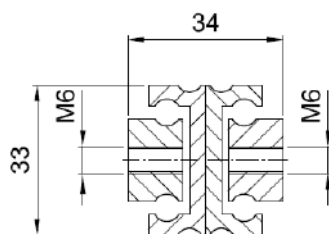
NTS30-26

See page 87



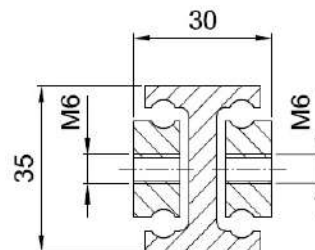
NTS33-34

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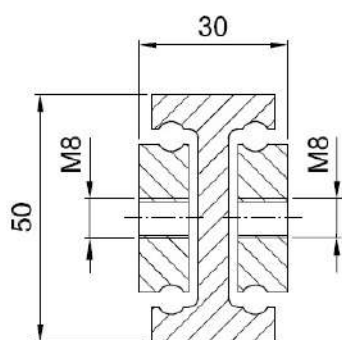
NTS35-30

See page 89



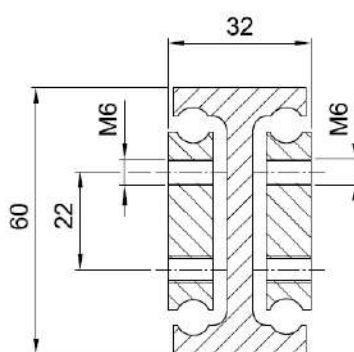
NTS50-30

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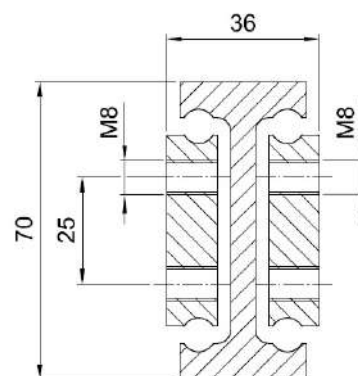
NTS60-32

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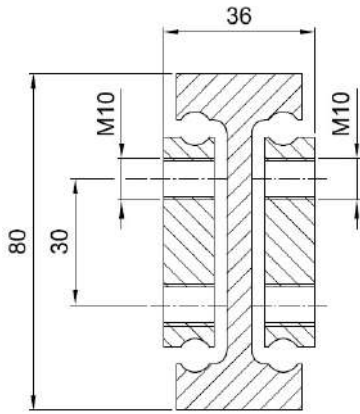
NTS70-36

See page 92



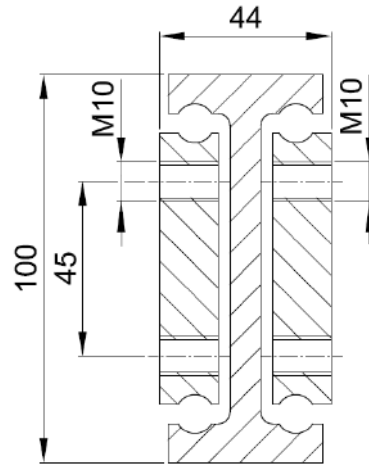
NTS80-36

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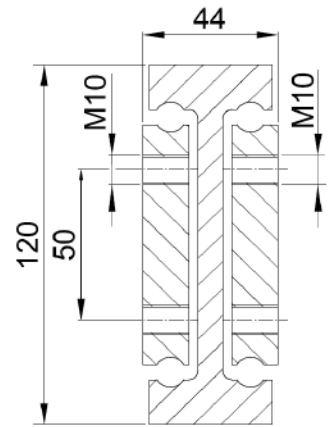
NTS100-44

See page 94



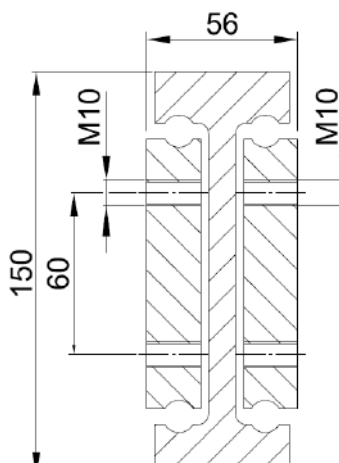
NTS120-44

See page 95



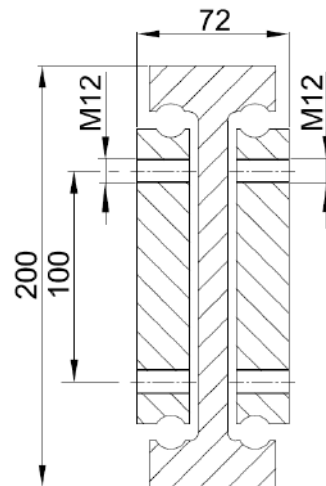
NTS150-56

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NTS200-72

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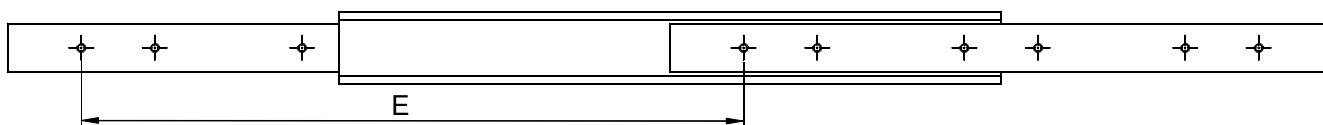
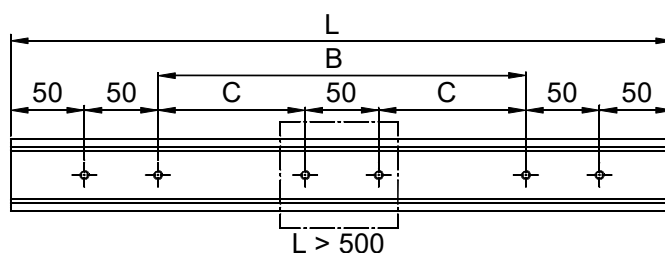
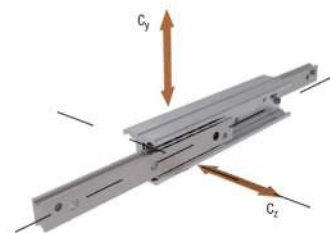
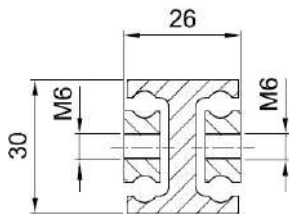
FULL EXTENSION | HEAVY LOAD

NTS30-26

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

Lmin200 **Lmax1200**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTS30-26-250	50		250	250	1000	500	1.2
NTS30-26-300	100		300	300	1050	525	1.4
NTS30-26-350	150		350	350	1100	550	1.6
NTS30-26-400	200		400	400	1100	550	1.8
NTS30-26-450	250		450	450	1050	525	2.1
NTS30-26-500	300		500	500	1050	525	2.3
NTS30-26-550		150	550	550	1000	500	2.5
NTS30-26-600		175	600	600	1000	500	2.8
NTS30-26-650		200	650	650	950	475	3.0
NTS30-26-700		225	700	700	900	450	3.2
NTS30-26-750		250	750	750	850	425	3.5
NTS30-26-800		275	800	800	800	400	3.7
NTS30-26-850		300	850	850	750	375	3.9
NTS30-26-900		325	900	900	700	350	4.1
NTS30-26-950		350	950	950	650	325	4.4
NTS30-26-1000		375	1000	1000	600	300	4.6

1) Cy and Cz= load capacities for pair of rails

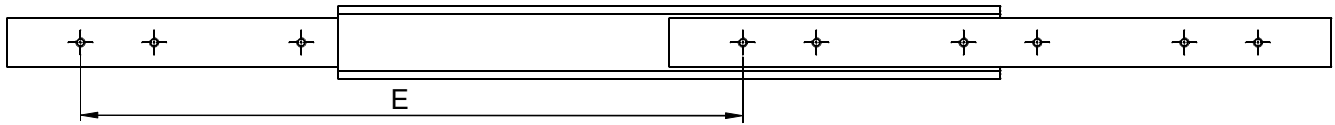
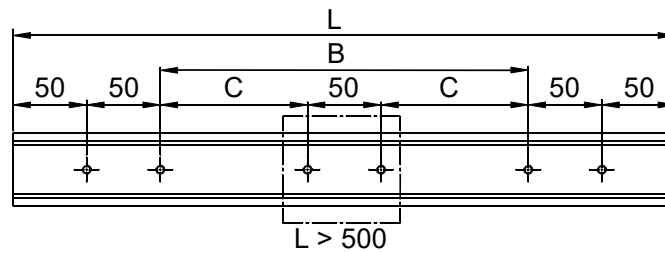
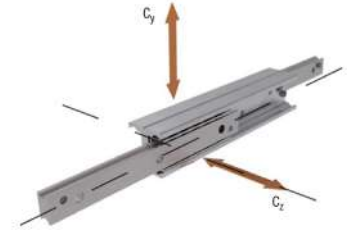
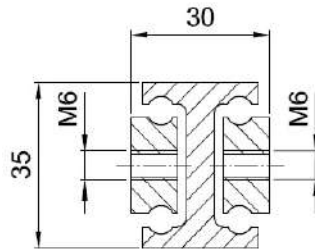
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTS35-30

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}200 **L_{max}2000**



Order Number	Hole Separation		Length [mm]	Extension [mm]	C _y ¹⁾ [N]	C _z ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTS35-30-250	50		250	250	1300	650	1.6
NTS35-30-300	100		300	300	1350	675	1.9
NTS35-30-350	150		350	350	1400	700	2.2
NTS35-30-400	200		400	400	1400	700	2.5
NTS35-30-450	250		450	450	1350	675	2.8
NTS35-30-500	300		500	500	1350	675	3.1
NTS35-30-550		150	550	550	1300	650	3.4
NTS35-30-600		175	600	600	1300	650	3.7
NTS35-30-650		200	650	650	1250	625	4.0
NTS35-30-700		225	700	700	1200	600	4.3
NTS35-30-750		250	750	750	1150	550	4.6
NTS35-30-800		275	800	800	1100	550	5.0
NTS35-30-850		300	850	850	1050	525	5.3
NTS35-30-900		325	900	900	1000	500	5.6
NTS35-30-950		350	950	950	950	475	5.9
NTS35-30-1000		375	1000	1000	900	450	6.2

1) C_y and C_z= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

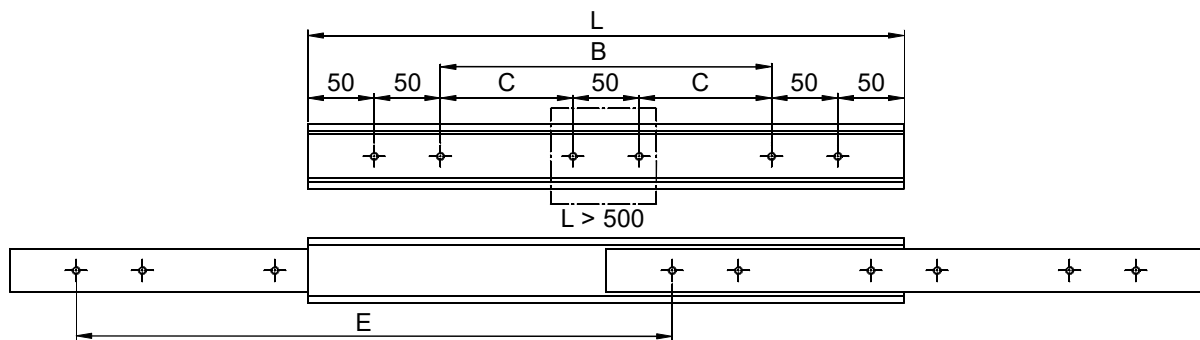
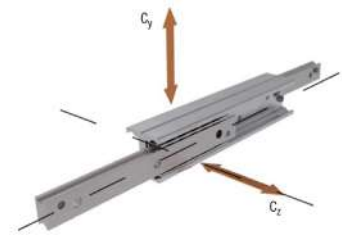
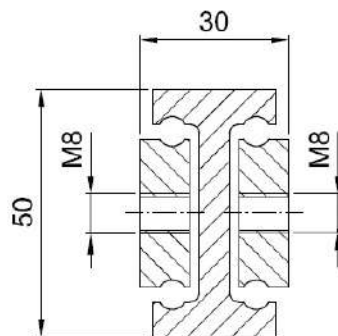
FULL EXTENSION | HEAVY LOAD

NTS50-30

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}250 **L_{max}2000**



Order Number	Hole Separation		Length [mm]	Extension [mm]	C _y ¹⁾ [N]	C _z ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTS50-30-250	50		250	250	2000	1000	2.4
NTS50-30-300	100		300	300	2300	1150	2.9
NTS50-30-350	150		350	350	2500	1250	3.2
NTS50-30-400	200		400	400	2650	1325	3.7
NTS50-30-450	250		450	450	2750	1375	4.1
NTS50-30-500	300		500	500	2800	1400	4.6
NTS50-30-550		150	550	550	2700	1350	5.0
NTS50-30-600		175	600	600	2700	1350	5.5
NTS50-30-650		200	650	650	2650	1325	6.0
NTS50-30-700		225	700	700	2550	1275	6.4
NTS50-30-750		250	750	750	2450	1225	6.9
NTS50-30-800		275	800	800	2350	1175	7.3
NTS50-30-850		300	850	850	2250	1125	7.8
NTS50-30-900		325	900	900	2150	1075	8.3
NTS50-30-950		350	950	950	2050	1025	8.7
NTS50-30-1000		375	1000	1000	1950	975	9.2
NTS50-30-1050		400	1050	1050	1850	925	9.6
NTS50-30-1100		425	1100	1100	1750	875	10.1
NTS50-30-1150		450	1150	1150	1700	850	10.6
NTS50-30-1200		475	1200	1200	1650	825	11.0
NTS50-30-1250		500	1250	1250	1500	750	11.5

1) C_y and C_z= load capacities for pair of rails

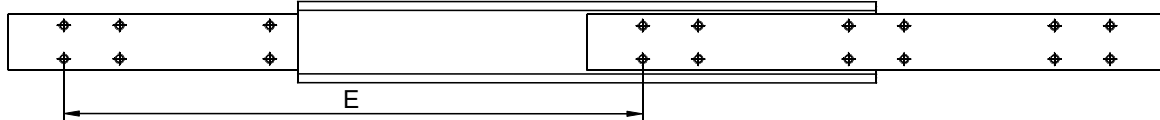
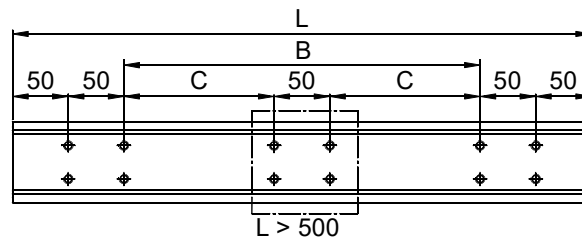
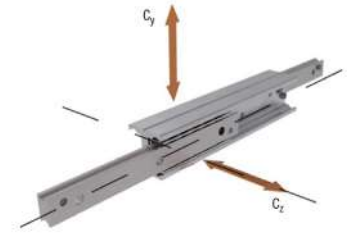
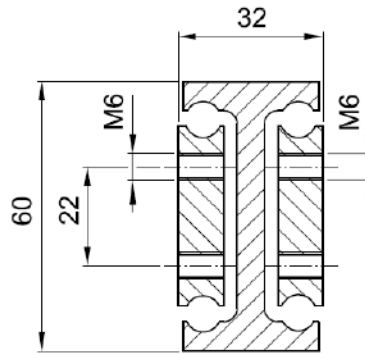
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTS60-32

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}250 **L_{max}2250**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTS60-32-400	200		400	400	5250	2625	4.6
NTS60-32-450	250		450	450	5350	2675	5.2
NTS60-32-500	300		500	500	5400	2700	5.8
NTS60-32-550		150	550	550	5500	2750	6.4
NTS60-32-600		175	600	600	5400	2700	7.0
NTS60-32-650		200	650	650	5350	2675	7.6
NTS60-32-700		225	700	700	5350	2675	8.2
NTS60-32-750		250	750	750	5100	2550	8.7
NTS60-32-800		275	800	800	4900	2450	9.3
NTS60-32-850		300	850	850	4700	2350	9.9
NTS60-32-900		325	900	900	4500	2250	10.5
NTS60-32-950		350	950	950	4300	2150	11.1
NTS60-32-1000		375	1000	1000	4050	2025	11.7
NTS60-32-1050		400	1050	1050	3850	1925	12.3
NTS60-32-1100		425	1100	1100	3700	1850	12.9
NTS60-32-1150		450	1150	1150	3500	1750	13.5
NTS60-32-1200		475	1200	1200	3300	1650	14.0
NTS60-32-1250		500	1250	1250	3100	1550	14.6
NTS60-32-1300		525	1300	1300	2900	1450	15.2
NTS60-32-1400		550	1400	1400	2500	1250	16.4

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

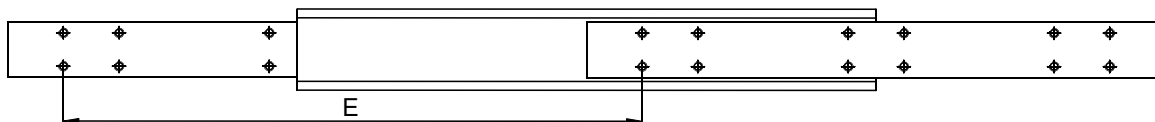
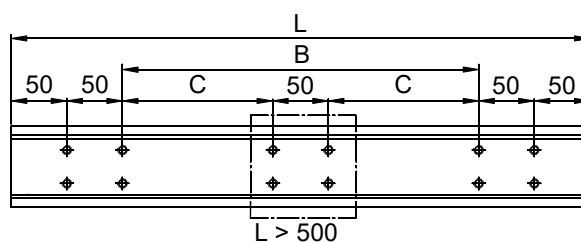
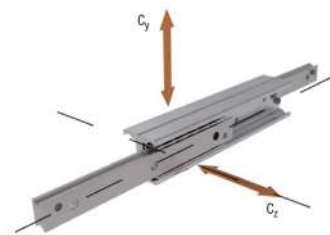
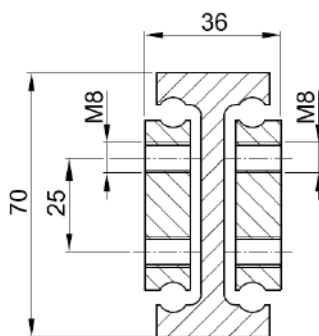
FULL EXTENSION | HEAVY LOAD

NTS70-36

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}300 **L_{max}2500**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTS70-36-400	200		400	400	6500	3250	5.8
NTS70-36-450	250		450	450	7000	3500	6.6
NTS70-36-500	300		500	500	7200	3600	7.3
NTS70-36-550		150	550	550	7400	3700	7.9
NTS70-36-600		175	600	600	7400	3700	8.5
NTS70-36-660		200	650	650	7300	3650	9.1
NTS70-36-700		225	700	700	7150	3575	9.7
NTS70-36-750		250	750	750	6950	3475	10.2
NTS70-36-800		275	800	800	6750	3375	10.8
NTS70-36-850		300	850	850	6550	3275	11.4
NTS70-36-900		325	900	900	6300	3150	12.0
NTS70-36-950		350	950	950	6100	3050	12.6
NTS70-36-1000		375	1000	1000	5800	2900	13.2
NTS70-36-1050		400	1050	1050	5600	2800	13.9
NTS70-36-1100		425	1100	1100	5450	2725	14.5
NTS70-36-1150		450	1150	1150	5200	2600	15.2
NTS70-36-1200		475	1200	1200	5000	2500	16.7
NTS70-36-1250		500	1250	1250	4775	2388	17.1
NTS70-36-1300		525	1300	1300	4550	2275	17.5
NTS70-36-1400		575	1400	1400	4100	2050	19.0
NTS70-36-1500		625	1500	1500	3650	1825	20.5

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

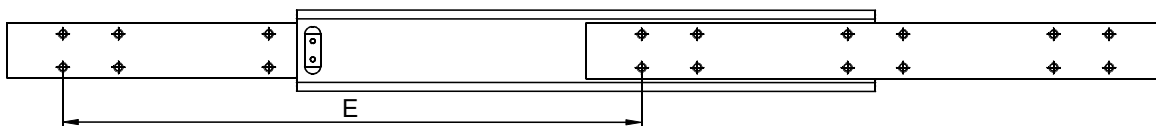
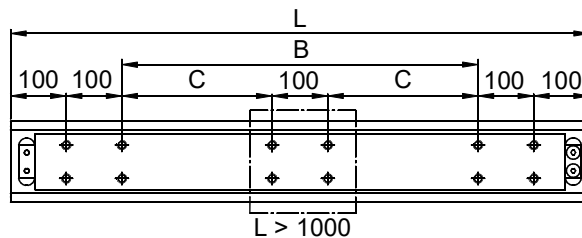
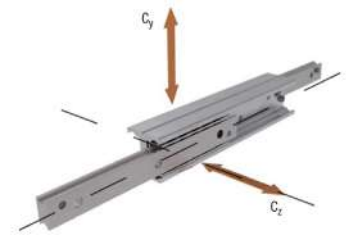
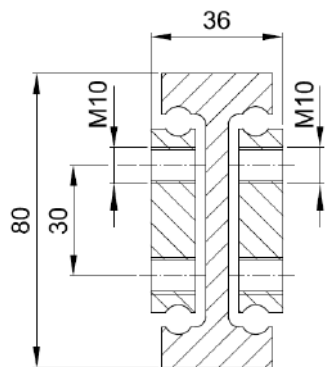
NTS80-36

TL3.2

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}300 **L_{max}3000**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Net Weight [kg]
	B [mm]	C [mm]					
NTS80-36-500	100		500	500	9000	4500	8.8
NTS80-36-550	150		550	550	9250	4625	9.6
NTS80-36-600	200		600	600	9350	4675	10.5
NTS80-36-650	250		650	650	9200	4600	11.4
NTS80-36-700	300		700	700	9050	4525	12.3
NTS80-36-750	350		750	750	8800	4400	13.1
NTS80-36-800	400		800	800	8600	4300	14.0
NTS80-36-850	450		850	850	8350	4175	14.9
NTS80-36-900	500		900	900	8100	4050	15.8
NTS80-36-950	550		950	950	7850	3925	16.6
NTS80-36-1000	600		1000	1000	7650	3825	17.5
NTS80-36-1100		300	1100	1100	7150	3575	19.3
NTS80-36-1200		350	1200	1200	6700	3350	21.0
NTS80-36-1300		400	1300	1300	6300	3100	22.8
NTS80-36-1400		450	1400	1400	5900	2850	24.5
NTS80-36-1500		500	1500	1500	5500	2600	26.3
NTS80-36-1600		550	1600	1600	5100	2300	28.0
NTS80-36-1700		600	1700	1700	4700	2150	29.8
NTS80-36-1800		650	1800	1800	4300	2050	31.5
NTS80-36-1900		700	1900	1900	4000	1850	33.3
NTS80-36-2000		750	2000	2000	3600	1650	35.0

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

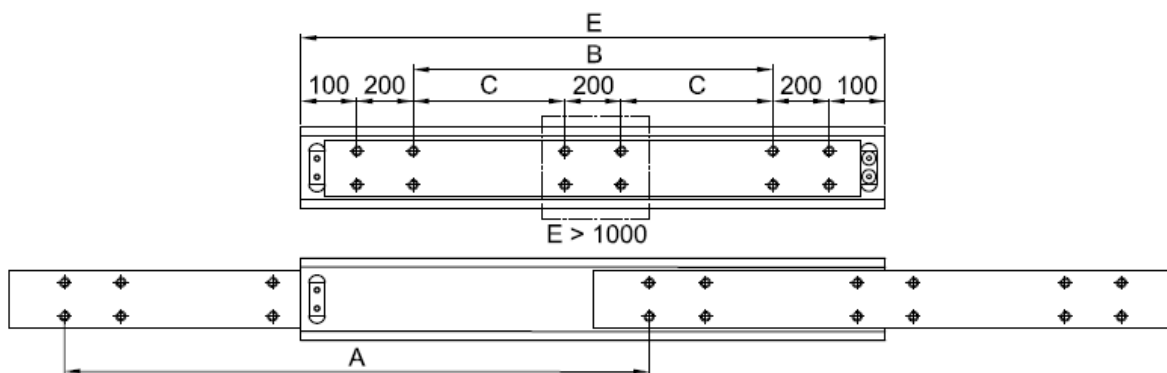
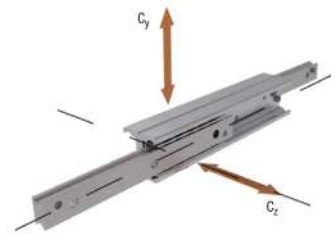
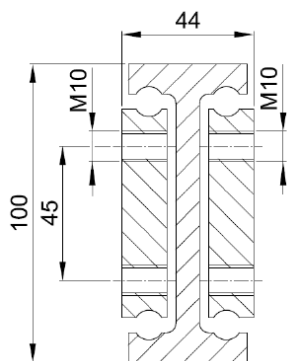
FULL EXTENSION | HEAVY LOAD

NTS100-44

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

Lmin500 Lmax3000



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]						
NTS100-44-700	100		700	700	11000	5500	11000	19.3
NTS100-44-750	150		750	750	10750	5375	10750	20.7
NTS100-44-800	200		800	800	10500	5250	10500	22.1
NTS100-44-850	250		850	850	10250	5125	10250	23.5
NTS100-44-900	300		900	900	10000	5000	10000	24.9
NTS100-44-950	350		950	950	9750	4875	9750	26.2
NTS100-44-1000	400		1000	1000	9500	4750	9500	27.6
NTS100-44-1100		150	1100	1100	9000	4500	9000	30.4
NTS100-44-1200		200	1200	1200	8500	4250	8500	33.2
NTS100-44-1300		250	1300	1300	7900	3950	7900	36.0
NTS100-44-1400		300	1400	1400	7300	3650	7300	38.7
NTS100-44-1500		350	1500	1500	6700	3350	6800	41.5
NTS100-44-1600		400	1600	1600	6100	3050	6300	44.2
NTS100-44-1700		450	1700	1700	5450	2725	5800	47.0
NTS100-44-1800		500	1800	1800	4800	2400	5300	49.7
NTS100-44-1900		550	1900	1900	4100	2050	4900	52.5
NTS100-44-2000		600	2000	2000	3500	1750	4500	55.3
NTS100-44-2100		650	2100	2100	3000	1500	4100	58.1
NTS100-44-2200		700	2200	2200	2600	1300	3700	60.9
NTS100-44-2300		750	2300	2300	2300	1150	3200	63.7
NTS100-44-2400		800	2400	2400	2100	1050	2800	66.5

1) Cy and Cz= load capacities for pair of rails

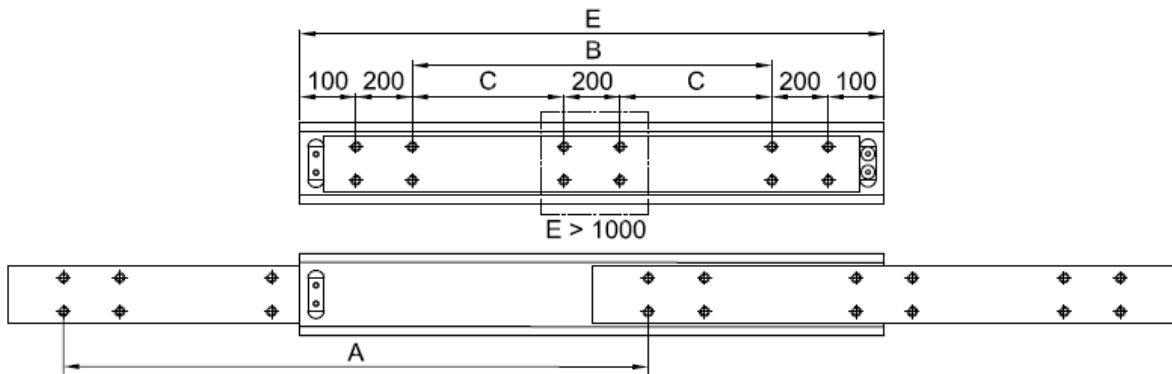
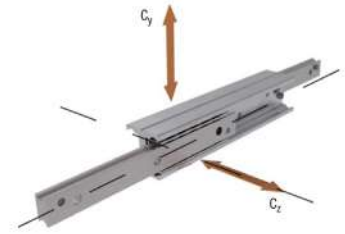
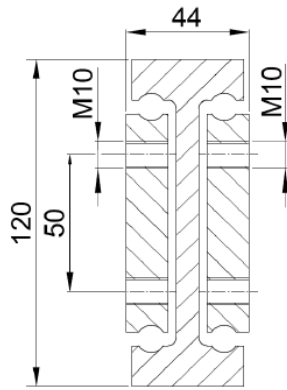
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTS120-44

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}700 **L_{max}3000**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]						
NTS120-44-700	100		700	700	11500	5750	11500	23.3
NTS120-44-750	150		750	750	11800	5900	11800	25.0
NTS120-44-800	200		800	800	11800	5900	11800	26.7
NTS120-44-850	250		850	850	11550	5775	11550	28.4
NTS120-44-900	300		900	900	11300	5650	11300	30.1
NTS120-44-950	350		950	950	11050	5525	11050	31.7
NTS120-44-1000	400		1000	1000	10800	5400	10800	33.4
NTS120-44-1100		150	1100	1100	10300	5150	10300	36.7
NTS120-44-1200		200	1200	1200	9800	4900	9800	40.1
NTS120-44-1300		250	1300	1300	9200	4600	9200	43.4
NTS120-44-1400		300	1400	1400	8600	4300	8600	46.8
NTS120-44-1500		350	1500	1500	8000	4000	8000	50,2
NTS120-44-1600		400	1600	1600	7400	3700	7400	53.5
NTS120-44-1700		450	1700	1700	6800	3400	6800	56.8
NTS120-44-1800		500	1800	1800	6100	3050	6100	60.2
NTS120-44-1900		550	1900	1900	5400	2700	5400	63.5
NTS120-44-2000		600	2000	2000	4700	2350	4800	66.9
NTS120-44-2100		650	2100	2100	3900	1950	4300	70.3
NTS120-44-2200		700	2200	2200	3350	1675	3900	73.7
NTS120-44-2300		750	2300	2300	2950	1475	3500	77.1
NTS120-44-2400		800	2400	2400	2750	1375	3000	80.5

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

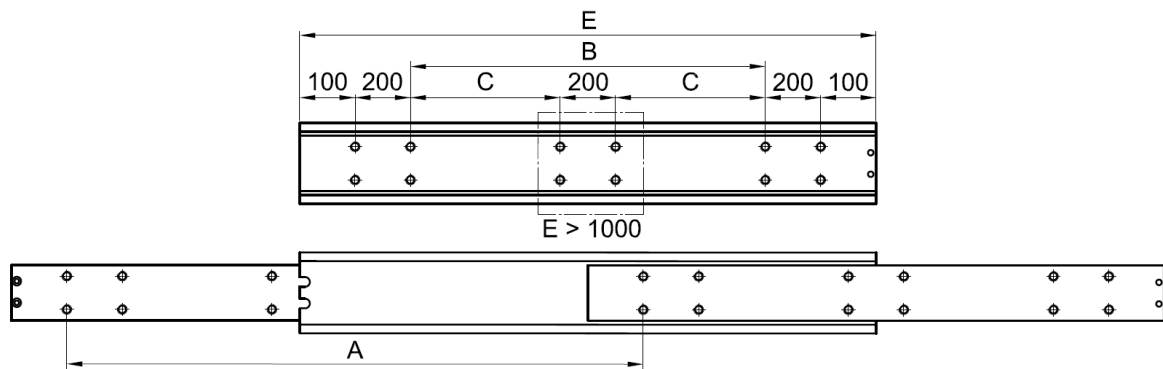
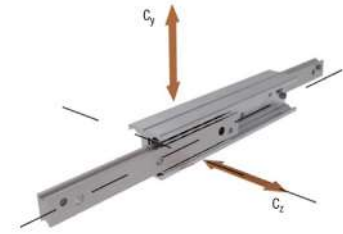
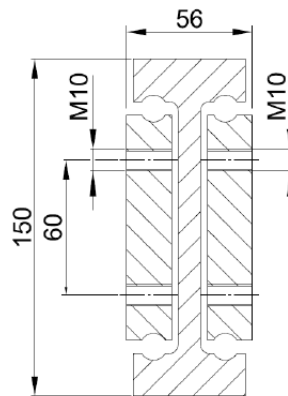
FULL EXTENSION | HEAVY LOAD

NTS150-56

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}500 **L_{max}3000**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]						
NTS150-56-700	100		700	700	13900	6950	13900	38.6
NTS150-56-750	150		750	750	13700	6850	13700	41.3
NTS150-56-800	200		800	800	13500	6750	13500	44.0
NTS150-56-850	250		850	850	13300	6650	13300	46.7
NTS150-56-900	300		900	900	13100	6550	13100	49.5
NTS150-56-950	350		950	950	12800	6400	12800	52.3
NTS150-56-1000	400		1000	1000	12500	6250	12500	55.0
NTS150-56-1100		150	1100	1100	12100	6050	12100	60.4
NTS150-56-1200		200	1200	1200	11700	5850	11700	66.0
NTS150-56-1300		250	1300	1300	11300	5650	11300	71.4
NTS150-56-1400		300	1400	1400	10900	5450	10900	76.9
NTS150-56-1500		350	1500	1500	10400	5200	10400	82.4
NTS150-56-1600		400	1600	1600	9900	4950	9900	87.9
NTS150-56-1700		450	1700	1700	9250	4625	9250	93.5
NTS150-56-1800		500	1800	1800	8600	4300	8600	99.0
NTS150-56-1900		550	1900	1900	7800	3900	7800	104.0
NTS150-56-2000		600	2000	2000	7000	3500	7000	109.9
NTS150-56-2100		650	2100	2100	6200	3100	6200	115.8
NTS150-56-2200		700	2200	2200	5400	2700	5400	121.7
NTS150-56-2300		750	2300	2300	4600	2300	4600	127.6
NTS150-56-2400		800	2400	2400	4000	2000	3800	133.5

1) Cy and Cz= load capacities for pair of rails

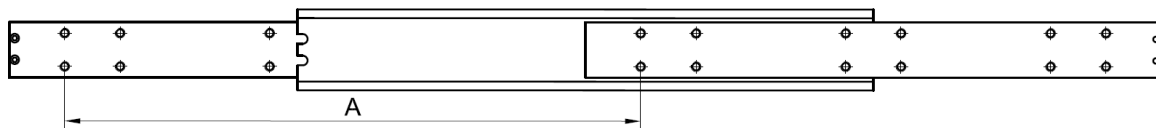
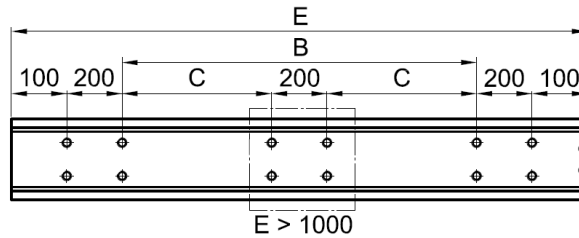
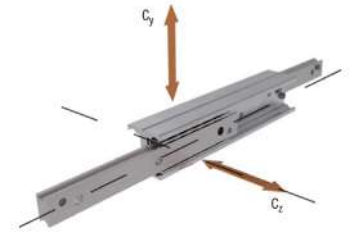
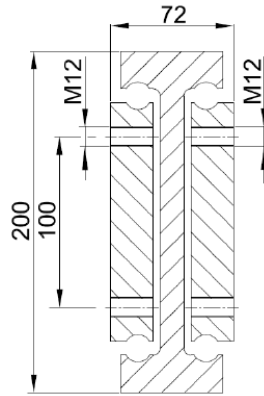
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTS200-72

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

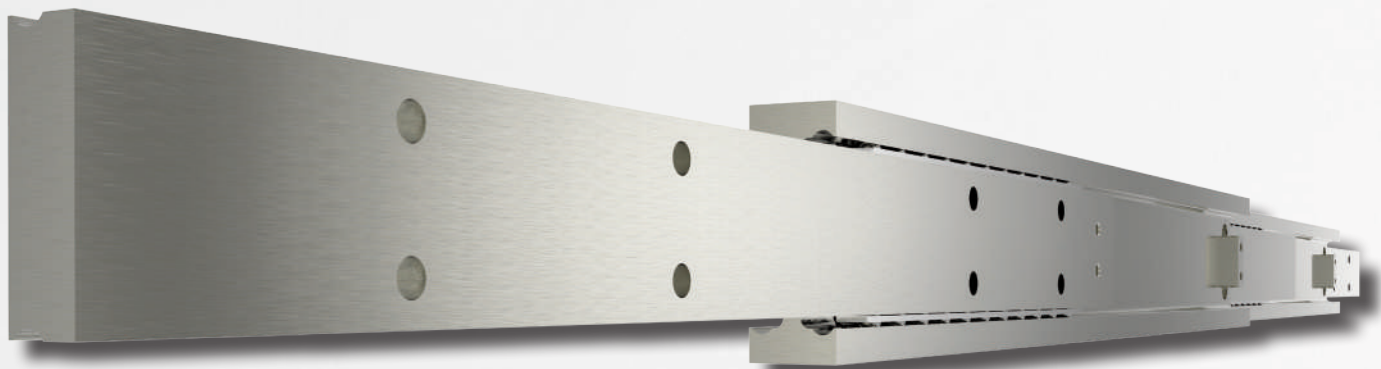
L_{min}500 **L_{max}3000**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Cy ¹⁾ [N]	Cz ¹⁾ [N]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]						
NTS200-72-700	100		700	700	15000	7500	15000	64.9
NTS200-72-750	150		750	750	16000	8000	16000	69.5
NTS200-72-800	200		800	800	17000	8500	17000	74.1
NTS200-72-850	250		850	850	17500	8750	17500	78.8
NTS200-72-900	300		900	900	17500	8750	17500	83.4
NTS200-72-950	350		950	950	17200	8600	17200	88.1
NTS200-72-1000	400		1000	1000	17000	8500	17000	92.7
NTS200-72-1100		150	1100	1100	16500	8250	16500	102.0
NTS200-72-1200		200	1200	1200	16000	8000	16000	111.2
NTS200-72-1300		250	1300	1300	15500	7750	15500	120.5
NTS200-72-1400		300	1400	1400	15000	7500	15000	129.7
NTS200-72-1500		350	1500	1500	14400	7200	14400	139.0
NTS200-72-1600		400	1600	1600	13600	6800	13600	148.3
NTS200-72-1700		450	1700	1700	12800	6400	12800	157.5
NTS200-72-1800		500	1800	1800	12000	6000	12000	166.8
NTS200-72-1900		550	1900	1900	11000	5500	11000	176.0
NTS200-72-2000		600	2000	2000	10000	5000	10000	185.3
NTS200-72-2100		650	2100	2100	9000	4500	9000	194.6
NTS200-72-2200		700	2200	2200	8000	4000	8000	203.9
NTS200-72-2300		750	2300	2300	6700	3350	6700	213.1

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).



OVER EXTENSION



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TL4.1 PRODUCT OVERVIEW

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TL4.2 OVER EXTENSION

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- NTU48-35DC

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- NTSU50-60DS

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- NTU59-41.5DC

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- NTSU60-40

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- NTSU60-68DS

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- NTU72-30T

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- NTU72-47.5DC

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- NTSU80-43

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- NTSU80-79DS

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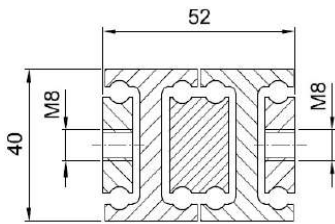
- NTSU150-64

PRODUCT OVERVIEW

OVER EXTENSION

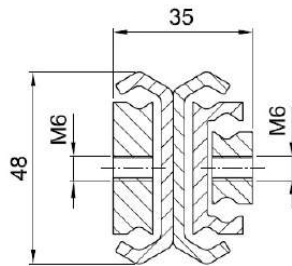
NTSU40-52DS

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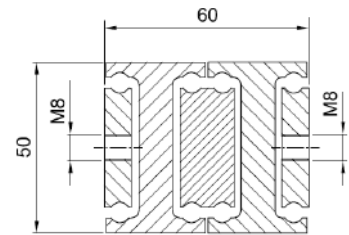
NTU48-35DC

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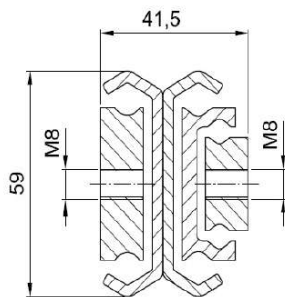
NTSU50-60DS

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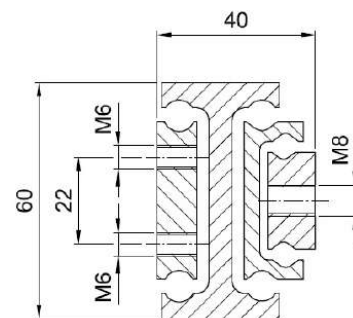
NTU59-41.5DC

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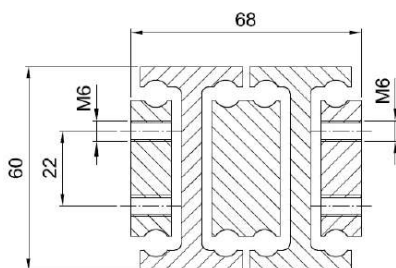
NTSU60-40

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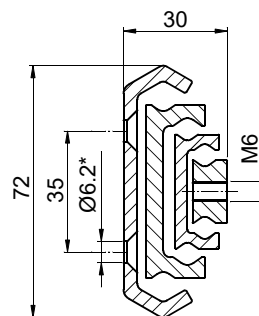
NTSU60-68DS

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NTU72-30T

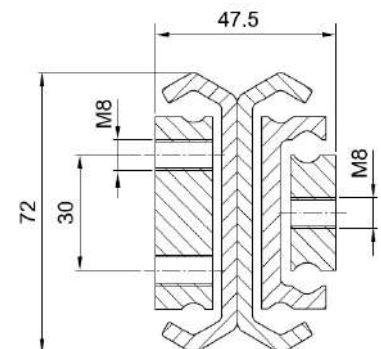
See page 107



* for M6 ISO 10642 screw

NTU72-47.5DC

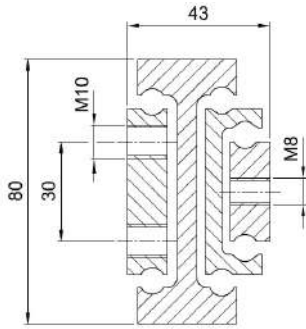
See page 108



OVER EXTENSION

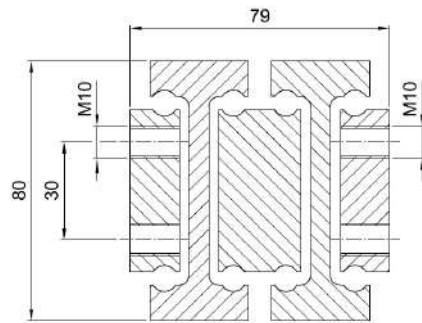
NTSU80-43

See page 109



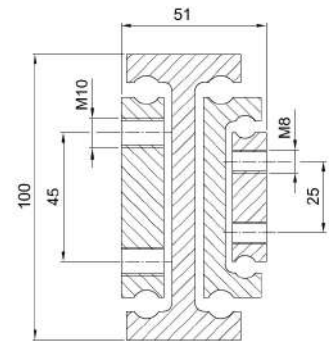
NTSU80-79DS

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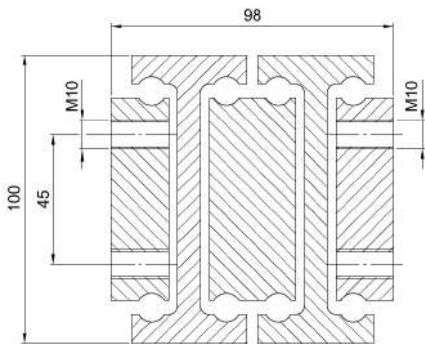
NTSU100-51

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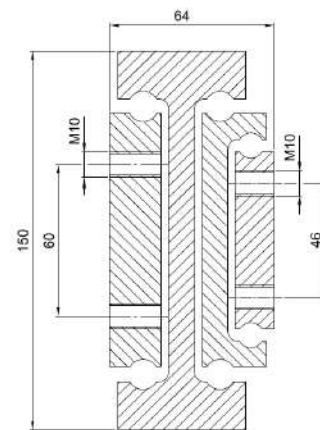
NTSU100-98DS

See page 112



NTSU150-64

See page 113



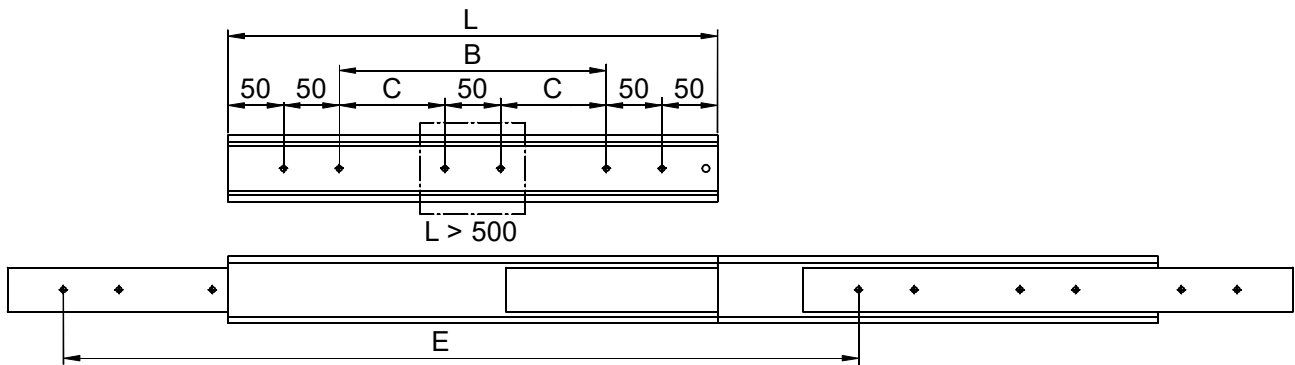
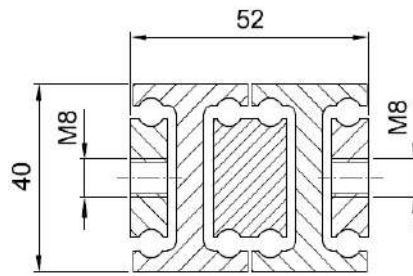
OVER EXTENSION

NTSU40-52DS

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}250 **L_{max}1200**



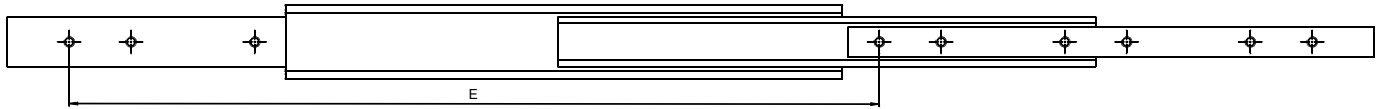
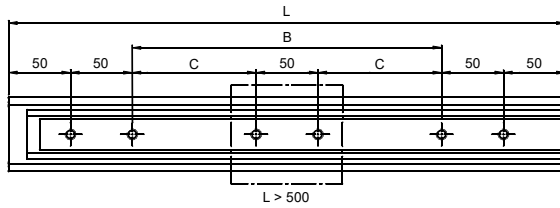
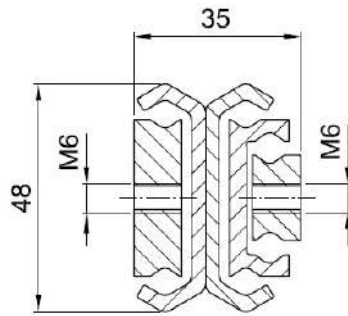
Order Number	Hole Separation		Length [mm]	Extension [mm]	Maximum Load/Pair [N]	Net Weight) [kg]
	B [mm]	C [mm]				
NTSU40-52DS-250	50		250	500	600	2.0
NTSU40-52DS-300	100		300	600	650	2.5
NTSU40-52DS-350	150		350	700	700	2.9
NTSU40-52DS-400	200		400	800	700	3.3
NTSU40-52DS-450	250		450	900	650	3.7
NTSU40-52DS-500	300		500	1000	600	4.1
NTSU40-52DS-550		150	550	1100	550	4.5
NTSU40-52DS-600		175	600	1200	525	4.9
NTSU40-52DS-650		200	650	1300	500	5.3
NTSU40-52DS-700		225	700	1400	475	5.7
NTSU40-52DS-750		250	750	1500	440	6.1
NTSU40-52DS-800		275	800	1600	400	6.5
NTSU40-52DS-850		300	850	1700	380	7.0
NTSU40-52DS-900		325	900	1800	350	7.4
NTSU40-52DS-950		350	950	1900	330	7.8
NTSU40-52DS-1000		375	1000	2000	300	8.2
NTSU40-52DS-1100		425	1100	2200	275	9.0
NTSU40-52DS-1200		475	1200	2400	250	9.8

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTU48-35DC

MATERIAL
Zinc-plated steel

L_{min}250 **L_{max}1200**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]				
NTU48-35DC-250	50		250	375	600	2.0
NTU48-35DC-300	100		300	450	650	2.5
NTU48-35DC-350	150		350	525	710	2.9
NTU48-35DC-400	200		400	600	750	3.3
NTU48-35DC-450	250		450	675	750	3.7
NTU48-35DC-500	300		500	750	750	4.1
NTU48-35DC-550		150	550	825	750	4.5
NTU48-35DC-600		175	600	900	710	4.9
NTU48-35DC-650		200	650	975	710	5.3
NTU48-35DC-700		225	700	1050	650	5.7
NTU48-35DC-750		250	750	1125	600	6.1
NTU48-35DC-800		275	800	1200	550	6.5
NTU48-35DC-850		300	850	1275	500	7.0
NTU48-35DC-900		325	900	1350	450	7.4
NTU48-35DC-950		350	950	1425	380	7.8
NTU48-35DC-1000		375	1000	1500	350	8.2
NTU48-35DC-1100		425	1100	1675	320	9.0
NTU48-35DC-1200		475	1200	1750	300	9.8

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

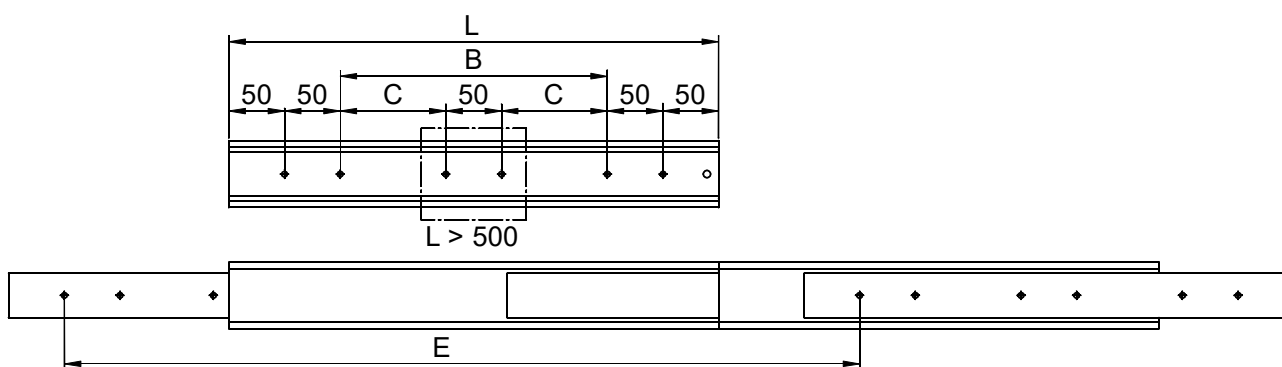
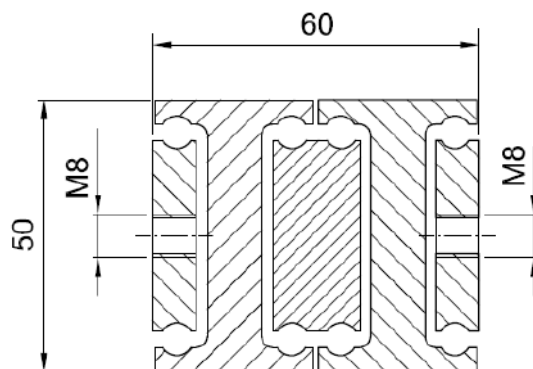
OVER EXTENSION

NTSU50-60DS

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}300 **L_{max}1500**



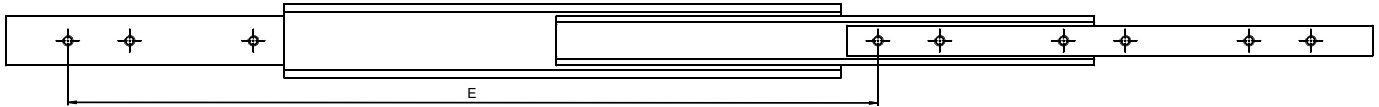
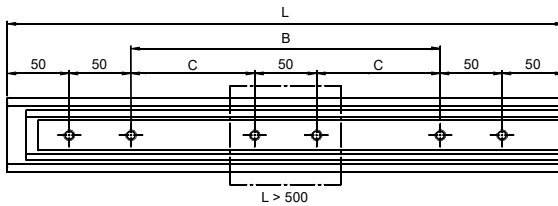
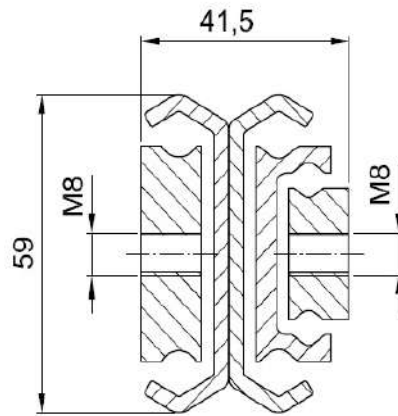
Order Number	Hole Separation		Length [mm]	Extension [mm]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]				
NTSU50-60DS-300	100		300	600	1260	3,3
NTSU50-60DS-350	150		350	700	1330	3,8
NTSU50-60DS-400	200		400	800	1365	4,4
NTSU50-60DS-450	250		450	900	1400	4,9
NTSU50-60DS-500	300		500	1000	1400	5,5
NTSU50-60DS-550		150	550	1100	1365	6,0
NTSU50-60DS-600		175	600	1200	1330	6,6
NTSU50-60DS-650		200	650	1300	1295	7,1
NTSU50-60DS-700		225	700	1400	1260	7,7
NTSU50-60DS-750		250	750	1500	1225	8,2
NTSU50-60DS-800		275	800	1600	1190	8,8
NTSU50-60DS-850		300	850	1700	1141	9,3
NTSU50-60DS-900		325	900	1800	1092	9,9
NTSU50-60DS-950		350	950	1900	1043	10,4
NTSU50-60DS-1000		375	1000	2000	994	11,0
NTSU50-60DS-1100		425	1100	2200	903	12,1
NTSU50-60DS-1200		475	1200	2400	812	13,2
NTSU50-60DS-1300		525	1300	2600	714	14,3
NTSU50-60DS-1400		575	1400	2800	602	15,4
NTSU50-60DS-1500		625	1500	3000	490	16,5

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTU59-41.5DC

MATERIAL
Zinc-plated steel

L_{min}250 **L_{max}1500**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]				
NTU59-41.5DC-300	100		300	450	1800	3.3
NTU59-41.5DC-350	150		350	525	1900	3.8
NTU59-41.5DC-400	200		400	600	1950	4.4
NTU59-41.5DC-450	250		450	675	2000	4.9
NTU59-41.5DC-500	300		500	750	2000	5.5
NTU59-41.5DC-550		150	550	825	1950	6.0
NTU59-41.5DC-600		175	600	900	1900	6.6
NTU59-41.5DC-650		200	650	975	1850	7.1
NTU59-41.5DC-700		225	700	1050	1800	7.7
NTU59-41.5DC-750		250	750	1125	1750	8.2
NTU59-41.5DC-800		275	800	1200	1700	8.8
NTU59-41.5DC-850		300	850	1275	1630	9.3
NTU59-41.5DC-900		325	900	1350	1560	9.9
NTU59-41.5DC-950		350	950	1425	1490	10.4
NTU59-41.5DC-1000		375	1000	1500	1420	11.0
NTU59-41.5DC-1100		425	1100	1650	1290	12.1
NTU59-41.5DC-1200		475	1200	1800	1160	13.2
NTU59-41.5DC-1300		525	1300	1950	1020	14.3
NTU59-41.5DC-1400		575	1400	2100	860	15.4
NTU59-41.5DC-1500			1500	2250	700	16.5

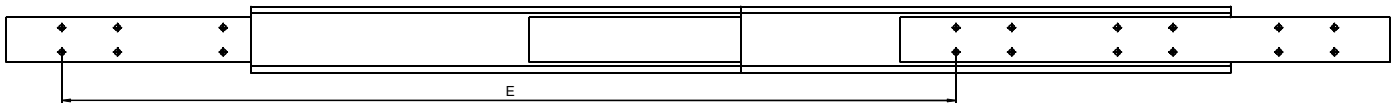
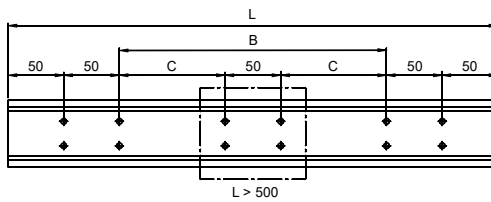
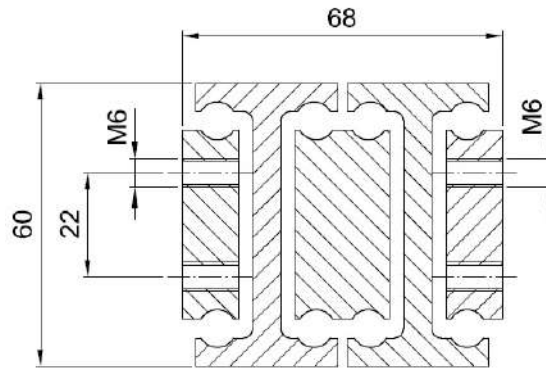
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116x).

NTSU60-68DS

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 or 316 stainless steel

L_{min}300 **L_{max}1500**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]				
NTSU60-68DS-500	300		500	1000	3000	11.5
NTSU60-68DS-550		150	550	1100	2925	12.6
NTSU60-68DS-600		175	600	1200	2850	13.8
NTSU60-68DS-650		200	650	1300	2775	14.9
NTSU60-68DS-700		225	700	1400	2700	16.0
NTSU60-68DS-750		250	750	1500	2625	17.1
NTSU60-68DS-800		275	800	1600	2550	18.2
NTSU60-68DS-850		300	850	1700	2445	19.4
NTSU60-68DS-900		325	900	1800	2340	20.5
NTSU60-68DS-950		350	950	1900	2235	21.7
NTSU60-68DS-1000		375	1000	2000	2130	22.8
NTSU60-68DS-1100		425	1100	2200	1935	25.0
NTSU60-68DS-1200		475	1200	2400	1740	27.3
NTSU60-68DS-1300		525	1300	2600	1530	29.6
NTSU60-68DS-1400		576	1400	2800	1290	31.8
NTSU60-68DS-1500		625	1500	3000	1050	34.1

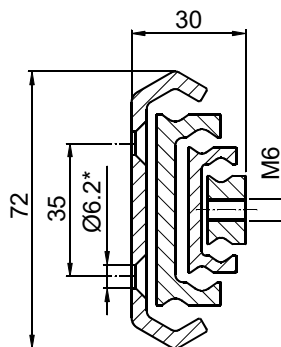
- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

OVER EXTENSION

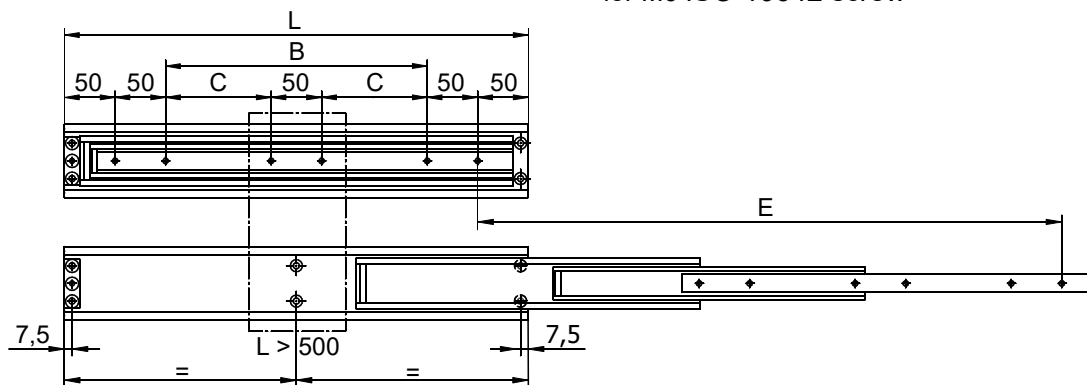
NTU72-30T

MATERIAL
Zinc-plated steel

Lmin300 Lmax1500



* for M6 ISO 10642 screw



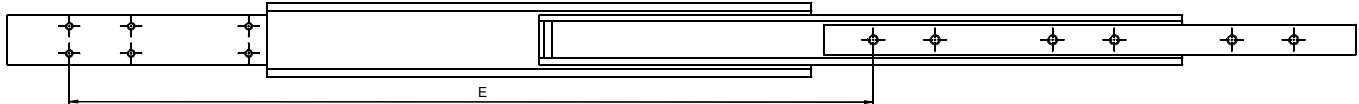
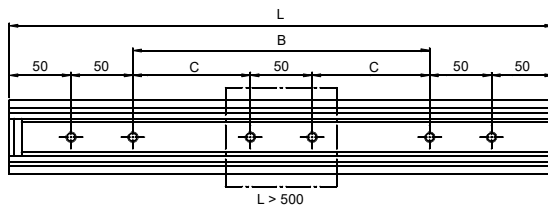
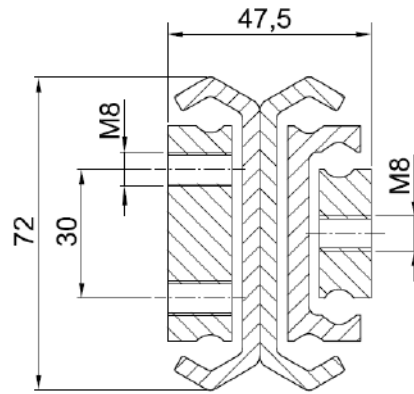
Order Number	Hole Separation		Length [mm]	Extension [mm]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]				
NTU72-30T-300	100		300	450	1380	2.6
NTU72-30T-350	150		350	525	1440	3.0
NTU72-30T-400	200		400	600	1500	3.4
NTU72-30T-450	250		450	675	1550	3.9
NTU72-30T-500	300		500	750	1500	4.3
NTU72-30T-550		150	550	825	1380	4.7
NTU72-30T-600		175	600	900	1320	5.2
NTU72-30T-650		200	650	975	1260	5.6
NTU72-30T-700		225	700	1050	1210	6.0
NTU72-30T-750		250	750	1125	1150	6.4
NTU72-30T-800		275	800	1200	1090	6.9
NTU72-30T-850		300	850	1275	1030	7.3
NTU72-30T-900		325	900	1350	980	7.7
NTU72-30T-950		350	950	1425	920	8.2
NTU72-30T-1000		375	1000	1500	860	8.6
NTU72-30T-1100		425	1100	1650	750	9.5
NTU72-30T-1200		475	1200	1800	630	10.3
NTU72-30T-1300		525	1300	1950	520	11.2
NTU72-30T-1400		575	1400	2100	400	12.0
NTU72-30T-1500		625	1500	2250	300	12.9

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTU72-47.5DC

MATERIAL
Zinc-plated steel

L_{min}300 **L_{max}1750**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]				
NTU72-47.5DC-300	100		300	450	2500	5.1
NTU72-47.5DC-350	150		350	525	2600	5.9
NTU72-47.5DC-400	200		400	600	2650	6.8
NTU72-47.5DC-450	250		450	675	2700	7.6
NTU72-47.5DC-500	300		500	750	2700	8.5
NTU72-47.5DC-550		150	550	825	2650	9.3
NTU72-47.5DC-600		175	600	900	2600	10.2
NTU72-47.5DC-650		200	650	975	2550	11.0
NTU72-47.5DC-700		225	700	1050	2500	11.9
NTU72-47.5DC-750		250	750	1125	2450	12.7
NTU72-47.5DC-800		275	800	1200	2400	13.6
NTU72-47.5DC-850		300	850	1275	2350	14.4
NTU72-47.5DC-900		325	900	1350	2300	15.3
NTU72-47.5DC-950		350	950	1425	2250	16.1
NTU72-47.5DC-1000		375	1000	1500	2200	17.0
NTU72-47.5DC-1100		425	1100	1650	2100	18.7
NTU72-47.5DC-1200		475	1200	1800	1950	20.4
NTU72-47.5DC-1300		525	1300	1950	1800	22.1
NTU72-47.5DC-1400		575	1400	2100	1650	23.8
NTU72-47.5DC-1500		625	1500	2250	1500	25.5

1) Cy and Cz= load capacities for pair of rails

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116)

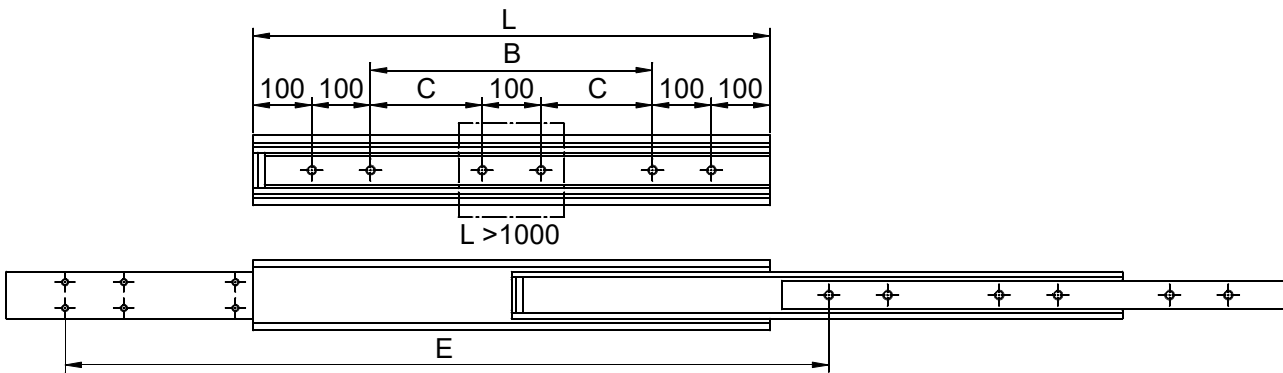
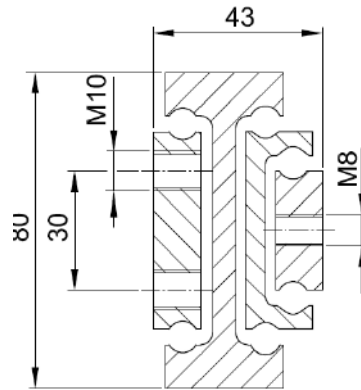
OVER EXTENSION

NTSU80-43

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 stainless steel

L_{min}400 **L_{max}2000**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]				
NTSU80-43-500	100		500	750	3200	9.5
NTSU80-43-550	150		550	825	3250	10.4
NTSU80-43-600	200		600	900	3300	11.4
NTSU80-43-650	250		650	975	3250	12.3
NTSU80-43-700	300		700	1050	3200	13.3
NTSU80-43-750	350		750	1125	3100	14.2
NTSU80-43-800	400		800	1200	3000	15.1
NTSU80-43-850	450		850	1275	2900	15.9
NTSU80-43-900	500		900	1350	2800	17.0
NTSU80-43-950	550		950	1425	2700	17.9
NTSU80-43-1000	600		1000	1500	2600	18.8
NTSU80-43-1100		300	1100	1650	2380	20.7
NTSU80-43-1200		350	1200	1800	2160	22.5
NTSU80-43-1300		400	1300	1950	1940	24.4
NTSU80-43-1400		450	1400	2100	1720	26.2
NTSU80-43-1500		500	1500	2250	1500	28.1

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTSU80-79DS

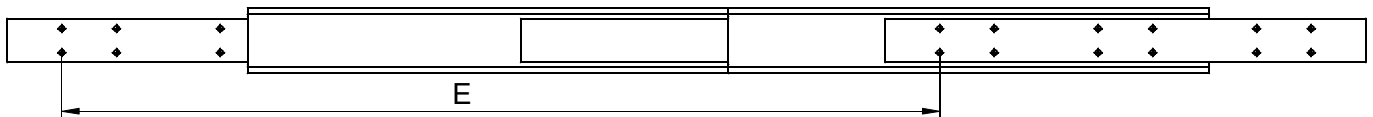
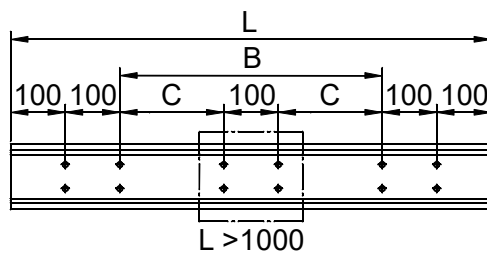
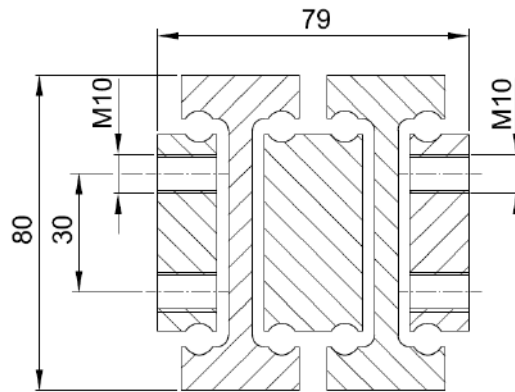
MATERIAL

Zinc-plated steel

ON REQUEST

Aluminum, AISI 304 stainless steel

L_{min}400 **L_{max}1800**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]				
NTSU80-79DS-500	100		500	1000	6540	17.6
NTSU80-79DS-550	150		550	1100	6720	19.3
NTSU80-79DS-600	200		600	1200	6792	21.1
NTSU80-79DS-650	250		650	1300	6684	22.8
NTSU80-79DS-700	300		700	1400	6576	24.8
NTSU80-79DS-750	350		750	1500	6396	26.3
NTSU80-79DS-800	400		800	1600	6252	28.0
NTSU80-79DS-850	450		850	1700	6072	29.8
NTSU80-79DS-900	500		900	1800	5892	31.5
NTSU80-79DS-950	550		950	1900	5712	33.3
NTSU80-79DS-1000	600		1000	2000	5568	35.0
NTSU80-79DS-1100		300	1100	2200	5208	38.5
NTSU80-79DS-1200		350	1200	2400	4884	42.0
NTSU80-79DS-1300		400	1300	2600	4524	45.4
NTSU80-79DS-1400		450	1400	2800	4164	48.9
NTSU80-79DS-1500		500	1500	3000	3804	52.4

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

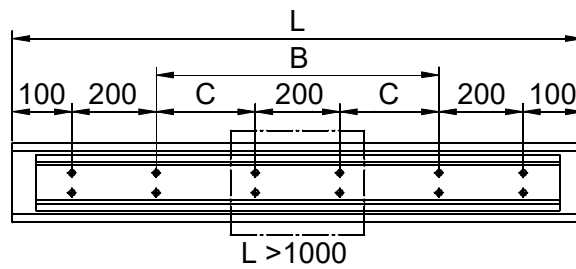
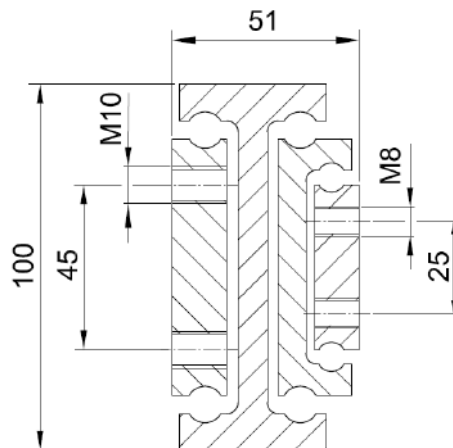
OVER EXTENSION

NTSU100-51

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 stainless steel

L_{min}500 **L_{max}2250**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Maximum Load/Pair [N]	Net Weight [kg]
	B [mm]	C [mm]				
NTSU100-51-700	100		700	1050	5600	20.2
NTSU100-51-750	150		750	1125	5600	21.7
NTSU100-51-800	200		800	1200	5400	23.1
NTSU100-51-850	250		850	1275	5200	24.5
NTSU100-51-900	300		900	1350	4800	26.0
NTSU100-51-950	350		950	1425	4600	27.4
NTSU100-51-1000	400		1000	1500	4400	28.8
NTSU100-51-1100		150	1100	1650	4100	31.7
NTSU100-51-1200		200	1200	1800	3800	34.6
NTSU100-51-1300		250	1300	1950	3500	37.5
NTSU100-51-1400		300	1400	2100	3200	40.3
NTSU100-51-1500		350	1500	2250	3000	43.2
NTSU100-51-1600		400	1600	2400	2700	45.0
NTSU100-51-1700		450	1700	2550	2400	48.9
NTSU100-51-1800		500	1800	2700	2100	51.8
NTSU100-51-1900		550	1900	2850	1800	54.7
NTSU100-51-2000		600	2000	3000	1500	57.5

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

NTSU100-98DS

MATERIAL

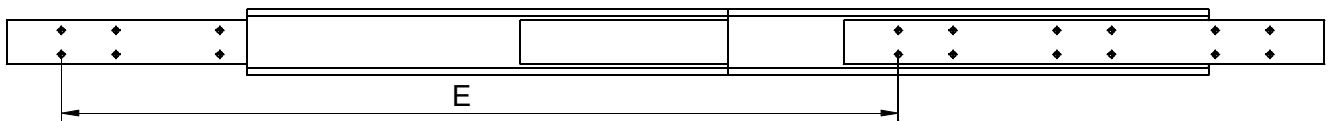
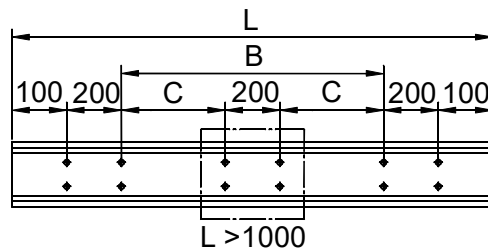
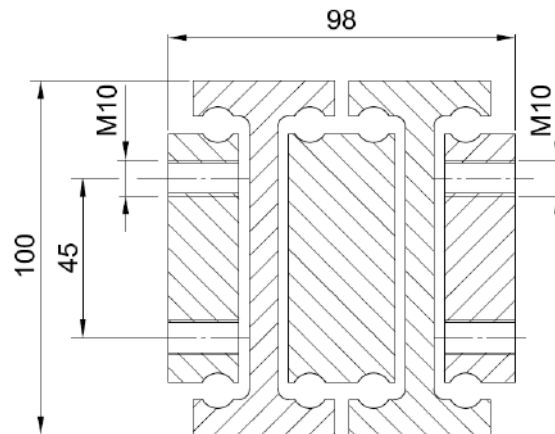
Zinc-plated steel

ON REQUEST

Aluminum, AISI 304 stainless steel

L_{min}500

L_{max}1800



Order Number	Hole Separation		Length [mm]	Extension [mm]	Net Weight [kg]	Maximum Load/Pair [N]
	B [mm]	C [mm]				
NTSU100-98DS-650	50		650	1300	39.1	11140
NTSU100-98DS-700	100		700	1400	42.1	10960
NTSU100-98DS-750	150		750	1500	45.1	10660
NTSU100-98DS-800	200		800	1600	48.2	10420
NTSU100-98DS-850	250		850	1700	51.2	10120
NTSU100-98DS-900	300		900	1800	54.2	9820
NTSU100-98DS-950	350		950	1900	57.2	9520
NTSU100-98DS-1000	400		1000	2000	60.2	9280
NTSU100-98DS-1100		150	1100	2200	66.2	8680
NTSU100-98DS-1200		200	1200	2400	72.2	8140
NTSU100-98DS-1300		250	1300	2600	78.3	7540
NTSU100-98DS-1400		300	1400	2800	84.3	6940
NTSU100-98DS-1500		350	1500	3000	90.3	6340

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).

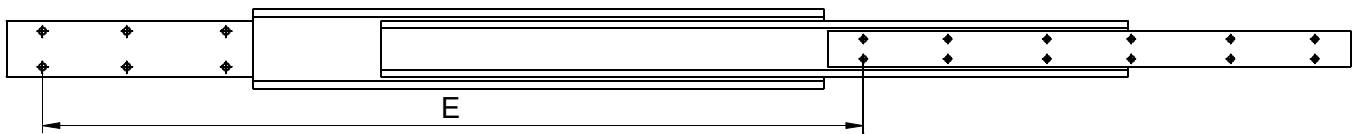
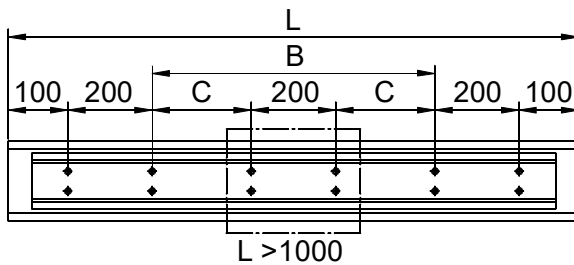
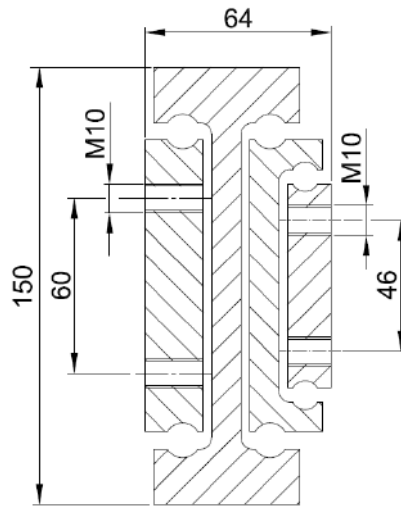
OVER EXTENSION

NTSU150-64

MATERIAL
Zinc-plated steel

ON REQUEST
Aluminum, AISI 304 stainless steel

L_{min}500 **L_{max}2250**



Order Number	Hole Separation		Length [mm]	Extension [mm]	Net Weight [kg]	Maximum Load/Pair [N]
	B [mm]	C [mm]				
NTSU150-64-700	100		700	1050	38.1	7100
NTSU150-64-750	150		750	1125	40.8	7200
NTSU150-64-800	200		800	1200	43.5	7600
NTSU150-64-850	250		850	1275	46.2	7500
NTSU150-64-900	300		900	1350	48.9	7350
NTSU150-64-950	350		950	1425	51.6	7200
NTSU150-64-1000	400		1000	1500	54.3	7000
NTSU150-64-1100		150	1100	1650	59.7	6600
NTSU150-64-1200		200	1200	1800	65.2	6200
NTSU150-64-1300		250	1300	1950	70.5	5800
NTSU150-64-1400		300	1400	2100	75.9	5300
NTSU150-64-1500		350	1500	2250	81.3	4800
NTSU150-64-1600		400	1600	2400	86.8	4300
NTSU150-64-1700		450	1700	2550	92.2	3800
NTSU150-64-1800		500	1800	2700	97.6	3300
NTSU150-64-1900		550	1900	2850	103.0	2800
NTSU150-64-2000		600	2000	3000	108.5	2400

- For options or special request, please contact our application engineering division.
- For technical information see Chapter 5 (page 116).



GENERAL INFORMATION

TL5

PAGE 117	TL5.1 TECHNICAL INFORMATION
PAGE 118	TL5.2 APPLICATION EXAMPLES
PAGE 119	TL5.3 PRODUCT MATRIX
PAGE 120	TL5.4 ORDER CODE / OPTIONS

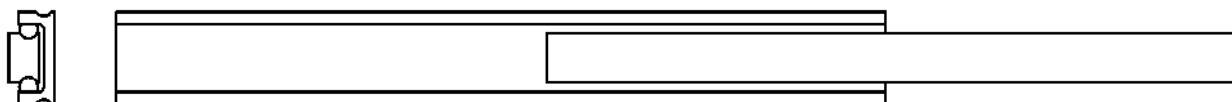
TECHNICAL INFORMATION

NADELLA TELESCOPIC SYSTEMS

Nadella telescopic slides are special ball bearing guides for high load rating. Two or more ball bearing mounted guide rails which can be drawn telescopic-wise guarantee a 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 proportions.

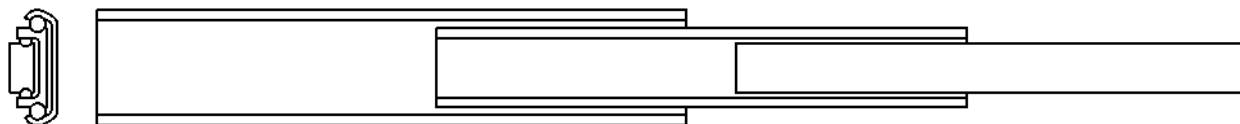
PARTIAL EXTENSION

extension length 50-70% of the assembly length



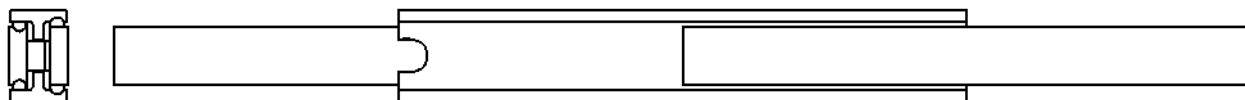
FULL EXTENSION

extension length 100% of the assembly length



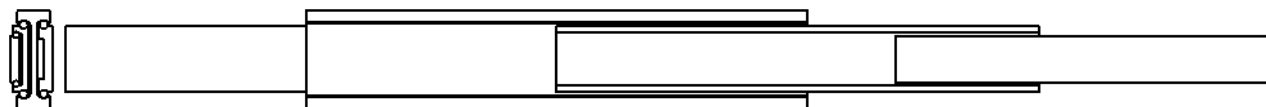
FULL EXTENSION

extension length 100% of the assembly length



OVER EXTENSION

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



From these types numerous variations are derived in order to offer the ideal telescopic slide regards extension length, load magnitude and assembly. Further functions as forward / backward extension, special end stop dampers and lockings can supplementary be delivered.

Nadella slides are linear guides with one or more carriages with linear ball bearings running on a rail. Telescopic slides and guides are based on the same linear rails and can be combined with each other.

Nadella aims to offer customized solutions with this product in a machine building quality. Telescopic slides are robust and need little maintenance for a long life. Economical solutions can be realized due to low supply costs and a simple assembly.

Nadella slides are linear guides with one or more carriages with recirculation linear ball bearings running on a rail. Telescopic slides and guides are based on the same linear rails and can be combined with each other.

APPLICATIONS FOR NADELLA TELESCOPIC SLIDES

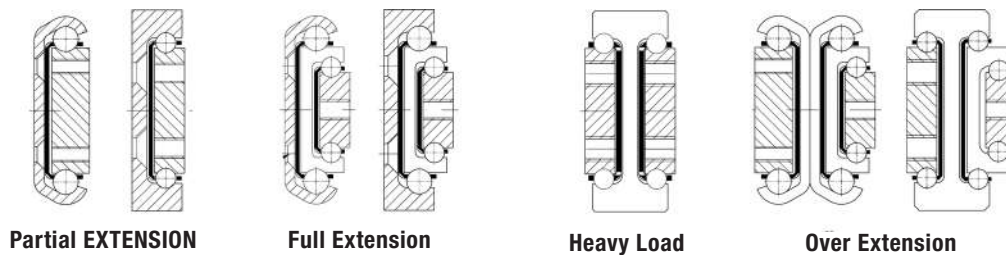
Nadella telescopic slides are used in many different areas, e.g. in the machine building, railcars, special vehicles for example in rescue vehicles, ship building or military vehicles, conveyor and storage techniques and many others. Telescopic slides are often used for battery boxes, handling and door systems, protection covers, switch cabinets, cashpoint (ATM) and other.

ASSEMBLY

An outer rail and one or more inner rails are the basic elements of the telescopic. Hardened balls are used as rolling elements in order to allow the relative motion between the outer and inner rails and to sustain the external applied load.

The balls are kept in the correct position by using a proper metal cage. With special chosen balls nearly zeroplay will be reached. A defined play for special enviromental conditions e.g. for high-temperature can be agreed. Standard end stops avoid an unintentional cutting of the different slide parts. All threads and fixing holes are easily accessible for assembly. Depending on the application it is possible to select the right preload on the slides by selecting the code option during the order phase.

The standard mounting and extension lengths of each telescopic slide is shown in the table in the previous chapters in the dimension sheets. The standard lengths of many mounting sizes are divided into 50 and 100 mm steps. Special mounting lengths or special extensions can be provided upon customer's demand.



TECHNICAL INFORMATION

STANDARD LENGTHS' TOLERANCES

Installation Length (mm)	≥ 150 < 420	≥ 420 < 1050	≥ 1050 < 2840
Tolerance (mm)	± 0,5	± 0,8	± 1,2

* values refer to ISO2768

STEEL, STAINLESS STEEL (NX) AND ALUMINIUM (A)

Nadella telescopic rails are made of coil material or machined and drawn steel profiles. According to size and allowed load the most economic manufacturing process is used. All linear guides are surface coated and therefore effectively protected against corrosion. On request, many telescopic rails can be produced of stainless steel (NX variation) or aluminium (A).

STANDARD MATERIALS

The guides made of stainless steel (NX) have a load capacity reduced by about 30% with respect the values in the product tables. The guides made of aluminum (A) have a load capacity reduced by about 70%.

	Guide Rail	Cage	Ball
Standard	C45	Steel Coated	100Cr6
Stainless Steel (NX2/ NX4)	NX2 Load -30% = AISI304 NX4 Load -40% = AISI316	Stainless Steel	X46Cr13
Aluminium (A)	EN AW 6060 Load -70%	Stainless Steel	X46Cr13

CORROSION PROTECTION THROUGH SURFACE TREATMENT

All Nadella telescopic slides are surface treated and are effectively protected against corrosion for many applications. Depending on demand, application case and surrounding condition different surface treatments are possible or stainless steel version (NX) is available. The resistance of the surface treatments varies from 240 up to more than 700 hrs.

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

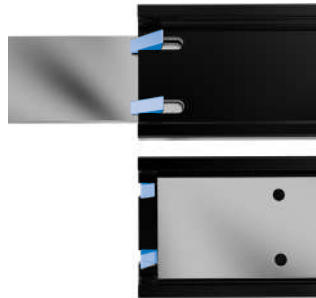
Shortcut	Coating	RoHS	Salt bath spraytest
NC1	Zink-Thick Layer Passivation	yes	about 240 hrs.
NC4	Zink Nickel Plated with Passivation	yes	over 700 hrs.

ADDITIONAL FUNCTIONS AND SPECIAL EQUIPMENTS

FORWARD AND BACKWARD EXTENSION (VR, VRM)

Many systems of the part and full extensions can be delivered as forward and backward extension.

The inner rails of full extensions in 3 parts can be controllably shifted through carriers (VRM). The advantage is a higher security because the unintentional moving of the middle rail of the backward extension can be prevented. The loads at the end of a telescopic slide can be better adopted with an optimum distribution of the rails.



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.

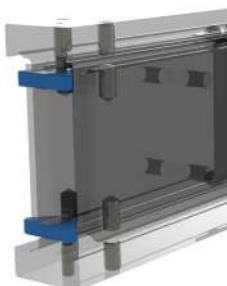
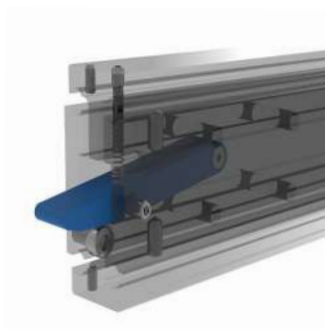
CATCHES (EHG, EHO, EOG) OR LOCKINGS (VO, VG, VOG)

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



VRM CARRIER



TECHNICAL INFORMATION

READY MADE COMPLETE SOLUTIONS

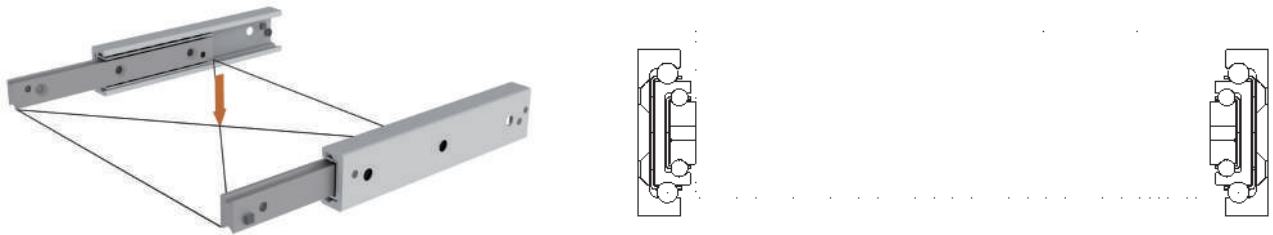
For special applications ready for installation complete solutions can be realized taking into account the economic lot size. These systems can be built out of telescopic rails with customized frame, end dampers, end stops or lockings and more.

CHOICE AND VARIATIONS OF TELESCOPIC RAILS

Nadella telescopic slides are preferential made for static applications with lower dynamic. They are ideal because of their unhardened tracks and the robust and rigid body for high loads which must be moved from time to time, but they are also ideal for constant movements with lower dynamic. Non-hardened telescopic rails can be used in case of low load applied to the drawer and for manual application in which there is a low number of cycles

GENERAL BASIC CONDITIONS:

- Pair wise operation
- Vertical installation 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



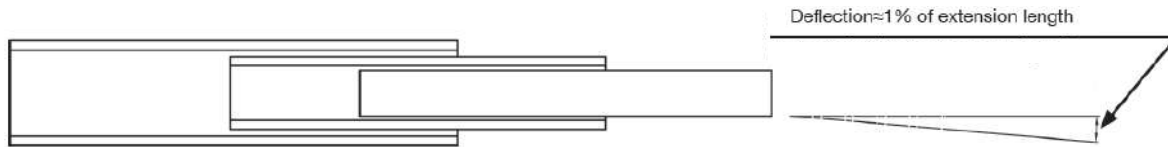
standard application: Drawer extension telescopic rails vertical.

With horizontally installed 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 more 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. Higher speed or 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 and a reduced lubrication interval. You have also the possibility to use telescopic rails with nitrided surface. 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.

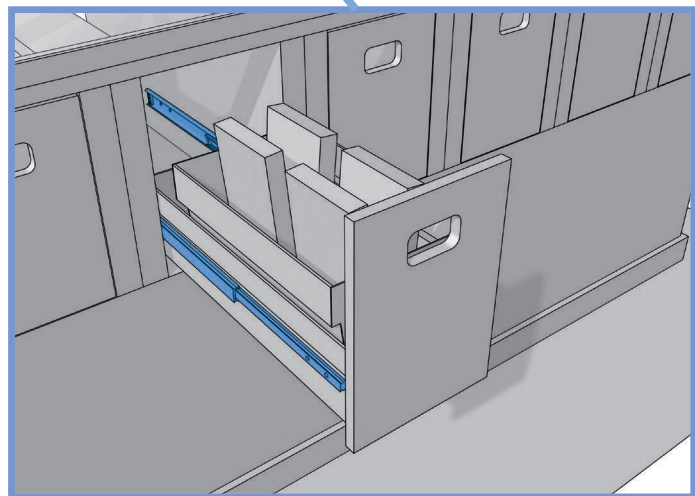
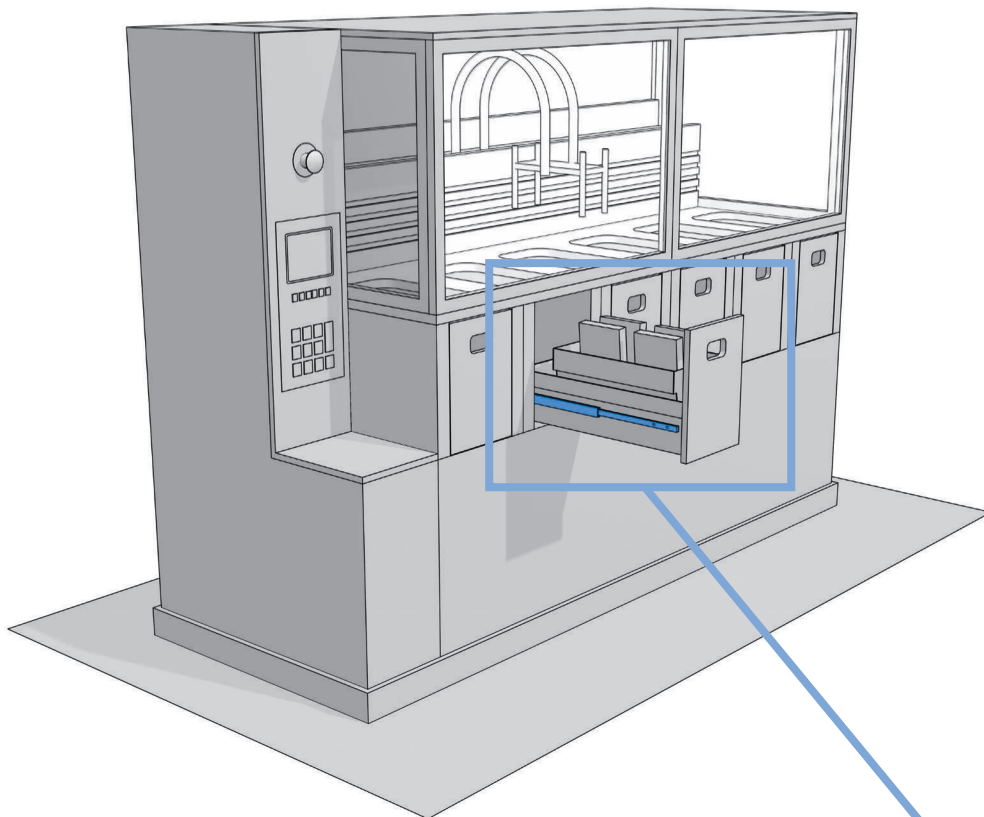
Telescopic rails must be mounted by using screws with a class 8.8 for assembly and to be fixed according to the screw producer's guidelines. Under certain circumstances the guide rails can be equipped with increased bearing air and can be mounted with a slight stroke.

MAINTENANCE AND LUBRICATION

Standard rails are delivered fully installed 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..

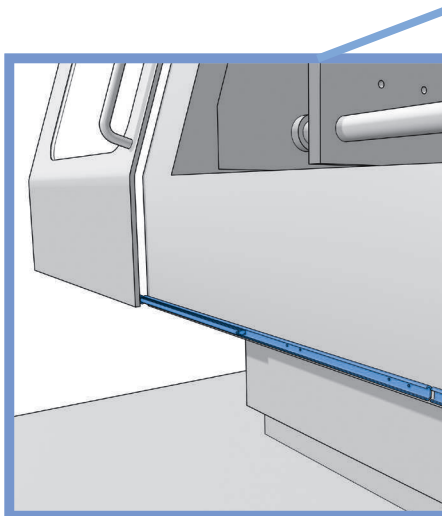
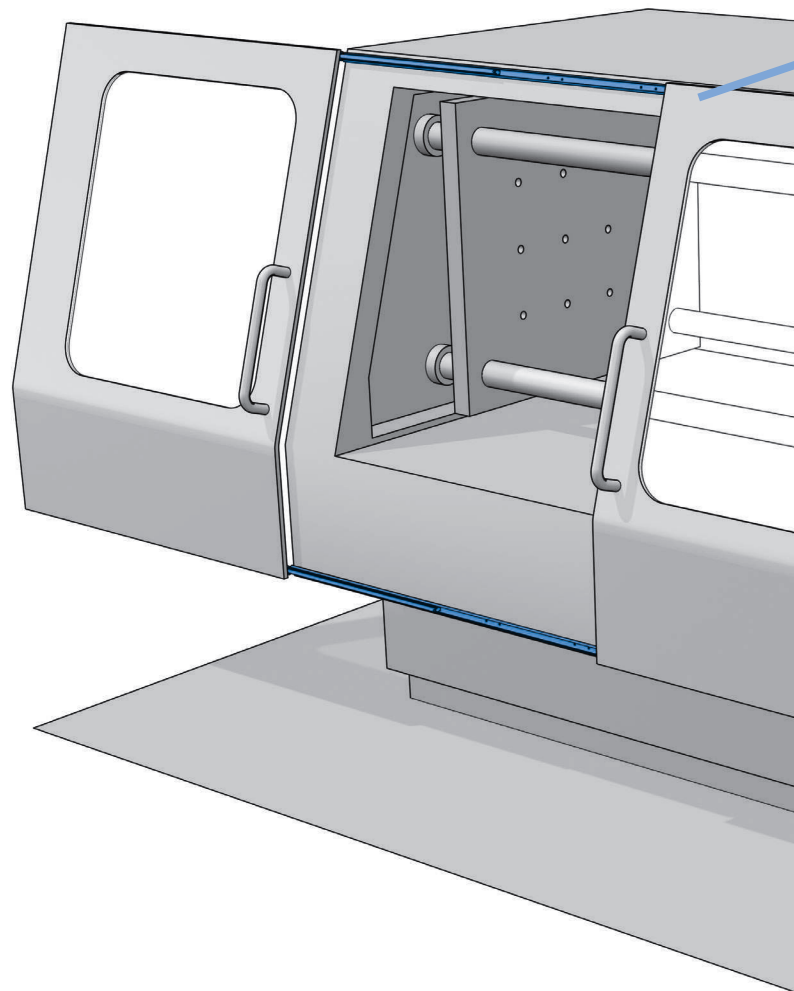
The ball cages of the telescopic slides are not restraint-guided, consequently the cage can move. In this case the end positions have to be reset.

Application	Product supply
Industry	Medical technology, semi-conductor technology, etc.
Products	Full-extension (NTV)

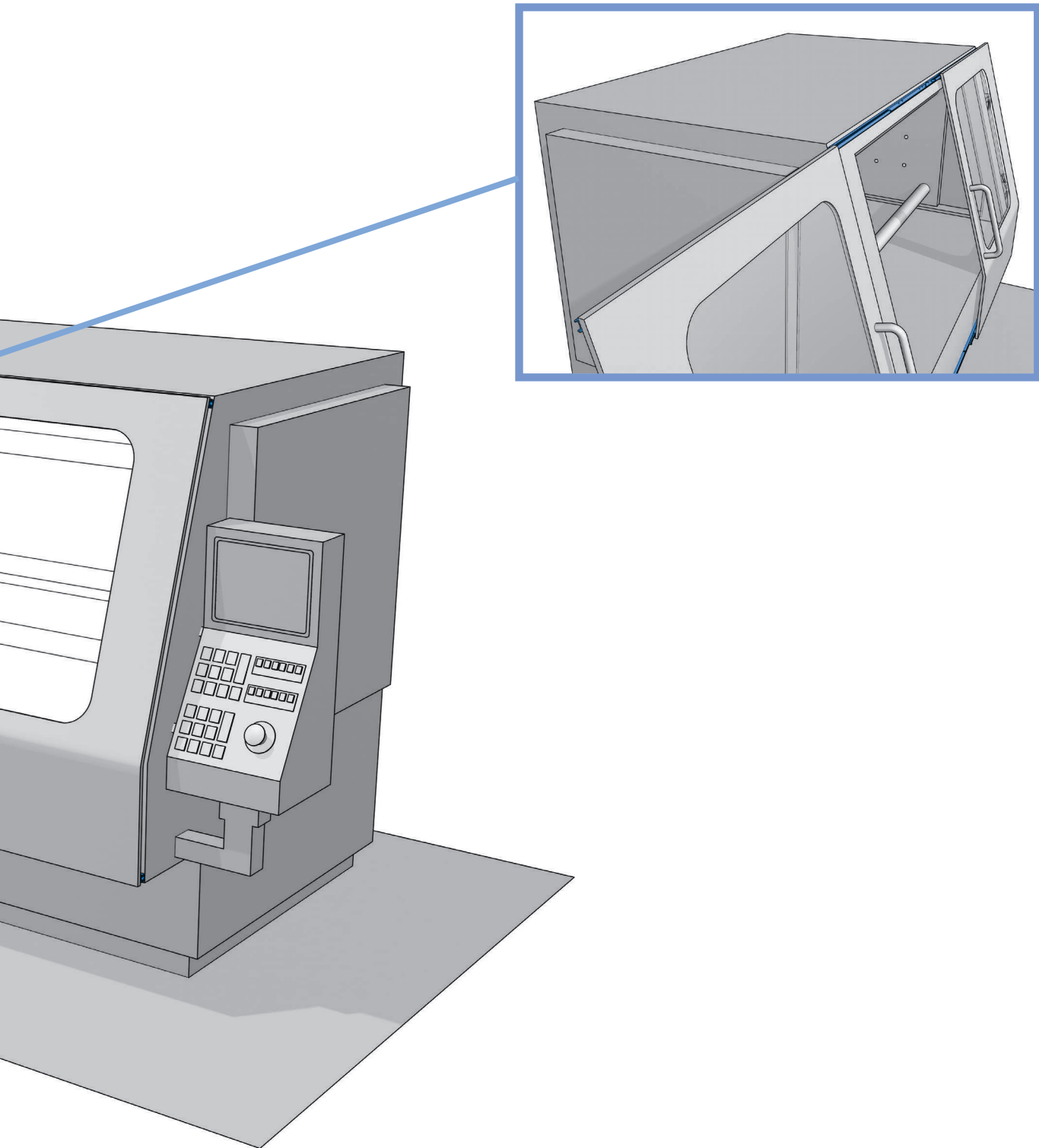


APPLICATION EXAMPLE

Application	Protective equipment
Industry	Rubber- and plastics machines Machinetools
Products	Full-extension (NTV)



TL5.2



PRODUCT MATRIX

Product group	Designation	Technical Manual				Material				Options													
		L from	L to	Extension length	Load (N)	ST	NX2	NX4	A	VG	VO	VOG	EHG	EHO	EOG	EDG	NC4	FDOG	VR	VRM	GS	SS	
Partial Extension	NTA40-18.5	200	1750	~ 60%	55-2550	x	x	x	x				x	x	x	x	x		x				
	NTA48-15T	250	1500	~ 60%	400-1800	x				x	x	x	x	x	x	x	x		x				
	NTA50-19.5	200	2000	~ 60%	500-2900	x	x	x	x	x	x	x	x	x	x	x	x		x				
	NTA59-17.5T	250	1750	~ 60%	500-2550	x				x	x	x	x	x	x	x	x		x				
	NTA70-21	300	2250	~ 60%	1000-4200	x	x	x	x	x	x	x	x	x	x	x	x		x				
	NTA72-21.5T	350	2000	~ 60%	500-3050	x				x	x	x	x	x	x	x	x		x				
	NTA80-22	350	2500	~ 60%	750-5000	x	x	x	x	x	x	x	x	x	x	x	x		x				
	NTA100-26	350	2750	~ 60%	1500-10000	x	x	x	x	x	x	x				x	x		x				
	NTA120-31	400	2750	~ 60%	1650-12000	x	x	x	x	x	x	x				x	x		x				
	NTA150-35	500	3000	~ 60%	2000-15500	x	x	x	x	x	x	x				x	x		x				
Full Extension	NTV27-26T	200	1300	~100%	700-1200	x							x	x	x	x	x		x				
	NTV27-28DC	200	1000	~100%	300-800	x											x		x				
	NTV48-20T	200	1500	~100%	500-1300	x				x			x	x	x	x	x		x				
	NTV48-22T	200	1500	~100%	410-1510	x				x	x	x	x	x	x	x	x		x				
	NTV48-30DC	250	1600	~100%	710-1910	x							x	x	x	x	x		x				
	NTV59-24T	300	2000	~100%	750-2200	x				x	x	x	x	x	x	x	x		x	x			
	NTV59-35DC	300	2000	~100%	750-2700	x							x	x	x	x	x		x				
	NTV60-26	300	2000	~100%	800-2900	x	x	x	x	x	x	x	x	x	x	x	x		x	x			
	NTV72-26T	300	2000	~100%	1400-3400	x				x	x	x	x	x	x	x	x		x	x			
	NTV72-43DC	300	2000	~100%	1600-3900	x				x	x	x	x	x	x	x	x		x				
	NTV80-27.5	500	2250	~100%	500-2250	x	x	x	x	x	x	x	x	x	x	x	x		x	x			
NTV100-34	500	2500	~100%	500-2500	x	x	x	x	x	x	x					x		x	x				

TL5.3

Product group	Designation	Technical Manual				Material				Options												
		L from	L to	Extension length	Load (N)	ST	NX2	NX4	A	VG	VO	VOG	EHG	EHO	EOG	EDG	NC4	FDOG	VR	VRM	GS	SS
Full Extension Heavy Load	NTS30-26	200	1200	~100%	300-1200		x	x	x							x	x		x	x	x	x
	NTS35-30	200	2000	~100%	200-1400		x	x	x				x	x	x	x	x		x	x	x	x
	NTS50-30	250	2000	~100%	400-2800	x	x	x	x				x	x	x		x		x	x	x	x
	NTS60-32	250	2250	~100%	500-5500	x	x	x	x	x	x	x	x	x	x		x	x	x	x		
	NTS70-36	300	2500	~100%	650-7400	x	x	x	x	x	x	x	x	x	x		x	x	x	x		
	NTS80-36	300	3000	~100%	1000-9350	x	x	x	x	x	x	x	x	x	x		x	x	x	x		
	NTS100-44	500	3000	~100%	1300-11000	x	x	x	x	x	x	x					x	x	x	x		
	NTS120-44	700	3000	~100%	1500-11800	x	x	x		x	x	x					x	x	x	x		
	NTS150-56	500	3000	~100%	2000-13900	x	x	x		x	x	x					x	x	x	x		
NTS200-72	500	3000	~100%	2500-17500	x	x			x	x	x					x	x	x	x			

Over Extension	NTSU40-52DS	250	1200	~200%	400-800	x	x	x	x								x				
	NTU48-35DC	250	1200	~150%	300-750	x										x	x				
	NTSU50-60DS	300	1500	~200%	700-2100	x	x	x	x								x				
	NTU59-41.5DC	250	1500	~150%	700-2000	x				x			x	x	x	x	x				
	NTSU60-40	300	1500	~150%	1500-2700	x	x	x	x	x			x	x	x	x	x		x		
	NTSU60-68DS	300	1500	~200%	2830-7250	x	x		x	x							x	x	x		
	NTU72-30T	300	1500	~150%	300-1550	x				x	x	x	x	x	x	x	x		x		
	NTU72-47.5DC	300	1750	~150%	1000-2700	x				x			x	x	x		x				
	NTSU80-43	400	2000	~150%	1000-3300	x	x	x	x	x			x	x	x		x		x		
	NTSU80-79DS	400	1800	~200%	3000-11320	x	x			x							x	x	x		
	NTSU100-51	500	2250	~150%	1000-5600	x	x			x							x		x		
	NTSU100-98DS	500	1800	~200%	4000-14000	x	x			x							x	x	x		
NTSU150-64	500	2250	~150%	1500-7600	x	x										x		x			

PRODUCT MATRIX

Legend	
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
GS	countersunk holes on one side - threaded holes on the other side
SS	countersunk holes on both sides
AZ	special extraction length NTV48-22T-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
ST	Standard steel with Zinc-Plating
NX2	AISI 304 profiles, cage and balls
NX4	AISI 316 profiles, cage and balls

NTV 48-22 T - 1000 - XX

RAIL TYPE

NTA
NTV
NTVZ
NTS
NTU
NTSU

INSTALLATION SIZE

ADDITION FOR SOME TYPES

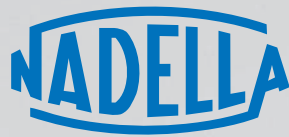
T = Sheettrail
DC = Back-to-Back Assembly
DS = 2 x I-beam (200 % Extension)

INSTALLATION LENGTH

OPTIONS

For some types several options possible.
Available options depending on type or size.

A = Aluminum
 NZ = Design acc. drawing (e.g: customised hole pattern)
 NC1 = Zink-Thick Layer Passivation (Standard)
 NC4 = Zinc-nickel plating treatment on profiles - AISI304 sst balls and cages
 NC5 = Standard Steel without Coating
 NX2 = Stainless Steel Rail (Load - 30%)
 NX4 = Stainless Steel Rail (Load - 40%)
 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
 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
 EDG = Damper, closed
 FDOG = Synchronous extraction in both directions by means of a cam system
 VR = Extraction in both directions
 VRM = Forward and backward extension including carrier for inner rail
 AZ = Special extraction length
 (E.g.: NTV48-22T-1000-AZ1080 = Extension Length 1080 mm)
 LL = Increased clearance for temperatures up to 200 °C
 LS = Increased clearance for temperatures > 200 °C
 GS = Countersunk holes on one side
 SS = Threaded holes on the other side countersunk holes on both sides
 FF = Without grease
 VS1 = Reduced clearance – preload class VS1
 VS2 = Reduced clearance – preload class VS2



Our customers' satisfaction is the basis for our success and growth.
That is why we are at your service around the world and always keep your requirements as a priority.

We have a worldwide network of sales engineers and distributors in Europe, Asia and the USA.
This allows us to ensure customer-oriented solutions and best in class delivery and service.

WORLDWIDE NETWORK



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