

PRODUCT DATA QUALIFICATION

Design criteria used for assessing product characteristics MT System Channels and Girders



Methodology:

- Finite element analysis
- Hardware tests



Standards and codes:

- EN 1990 Basics of structural design 03.2003
- EN 1991-1-1 Eurocode 1: Actions on structures – Part 1-1: General actions – densities, self-weight, imposed loads for buildings 09.2011
- EN 1993-1-1 Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings 03.2012
- EN 1993-1-3 Eurocode 3: Design of steel structures – Part 1-3: General rules- Supplementary rules for cold-formed members and sheeting 03.2012
- EN 1993-1-5 Eurocode 3: Design of steel structures – Part 1-5: Plated structural elements 03.2012
- EN 1993-1-8 Eurocode 3: Design of steel structures – Part 1-8: Design of joints 03.2012
- EN 10025-2 Hot rolled products of structural steels- Part 2: technical delivery conditions for non-alloy structural steels 02.2005
- EAD 280016-00-0602: Products for installation systems for supporting technical building equipment

Load conditions:

- static loads

Product portfolio:

Item number	Description	Eurocode	ETA	EN 1090
2268492	Installation channel MT-10			
2268493	Installation channel MT-15			
2268494	Installation channel MT-15 OC			
2268495	Installation channel MT-20			
2268496	Installation channel MT-20 OC			
2268502	Installation channel MT-40 T			
2268504	Installation channel MT-40 T OC			
2268498	Installation channel MT-30			
2268500	Installation channel MT-30 OC			
2268497	Installation channel MT-30 S			
2268499	Installation channel MT-30 S OC			
2268506	Installation channel MT-40			
2268508	Installation channel MT-40 OC			
2268505	Installation channel MT-40 S			
2268507	Installation channel MT-40 S OC			
2268510	Installation channel MT-50			
2268512	Installation channel MT-50 OC			
2268509	Installation channel MT-50 S			
2268511	Installation channel MT-50 S OC			

PRODUCT DATA QUALIFICATION

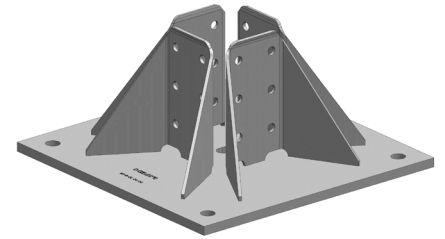
Design criteria used for loading capacity MT System Channels and Girders

Continues from previous page:

Item number	Description	Eurocode	ETA	EN 1090
2268514	Installation channel MT-60		CE	
2268516	Installation channel MT-60 OC		CE	
2268513	Installation channel MT-60 S		CE	
2268515	Installation channel MT-60 S OC		CE	
2268518	Installation channel MT-40D		CE	
2268520	Installation channel MT-40D OC		CE	
2268517	Installation channel MT-40D S		CE	
2268519	Installation channel MT-40D S OC		CE	
2268365	Installation girder MT-70 OC		CE	EN 1090
2268364	Installation girder MT-70 S OC		CE	EN 1090
2268367	Installation girder MT-80 OC		CE	EN 1090
2268366	Installation girder MT-80 S OC		CE	EN 1090
2268369	Installation girder MT-90 OC		CE	EN 1090
2268368	Installation girder MT-90 S OC		CE	EN 1090
2268491	Installation girder MT-100 OC		CE	EN 1090
2268490	Installation girder MT-100 S OC		CE	EN 1090

PRODUCT DATA QUALIFICATION

Design criteria used for assessing product characteristics MT System Base Connectors



Methodology:

- Finite element analysis
- Hardware tests



Standards and codes:

- EN 1990 Basics of structural design 03.2003
- EN 1991-1-1 Eurocode 1: Actions on structures – Part 1-1: General actions – densities, self-weight, imposed loads for buildings 09.2011
- EN 1993-1-1 Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings 03.2012
- EN 1993-1-3 Eurocode 3: Design of steel structures – Part 1-3: General rules- Supplementary rules for cold-formed members and sheeting 03.2012
- EN 1993-1-5 Eurocode 3: Design of steel structures – Part 1-5: Plated structural elements 03.2012
- EN 1993-1-8 Eurocode 3: Design of steel structures – Part 1-8: Design of joints 03.2012
- EN 10025-2 Hot rolled products of structural steels- Part 2: technical delivery conditions for non-alloy structural steels 02.2005
- EAD 280016-00-0602: Products for installation systems for supporting technical building equipment

Load conditions:

- static loads

Product portfolio:

Item number	Description	Eurocode	ETA	EN 1090
2272086	MT-B-L			
2272088	MT-B-L OC			
2272090	MT-B-T			
2272092	MT-B-T OC			
2272094	MT-B-O2			
2272096	MT-B-O2 OC			
2282212	MT-B-O2B			
2282213	MT-B-O2B OC			
2272098	MT-B-O4			
2272099	MT-B-O4 OC			
2272100	MT-B-GS T OC			EN 1090
2272101	MT-B-GS O4U OC			EN 1090
2272103	MT-B-GL O4 OC			EN 1090
2272104	MT-B-GXL O4 OC			EN 1090
2272106	MT-B-GXL S1 OC			EN 1090
2272107	MT-B-GXL S2 OC			EN 1090
2272108	MT-B-GXL S3 OC			EN 1090
2272109	MT-B-G WS			EN 1090

PRODUCT DATA QUALIFICATION

Design criteria used for loading capacity MT System Base Connectors

Continues from previous page:

Item number	Description	Eurocode	ETA	EN 1090
2273587	MT-BC-GS T OC			
2273589	MT-BC-GXL T OC			
2272110	MT-P-GXL S1 OC			

PRODUCT DATA QUALIFICATION

Design criteria used for assessing product characteristics MT Connectors



Methodology:

- Finite element analysis
- Hardware tests



Standards and codes:

- EN 1990 Basics of structural design 03.2003
- EN 1991-1-1 Eurocode 1: Actions on structures – Part 1-1: General actions – densities, self-weight, imposed loads for buildings 09.2011
- EN 1993-1-1 Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings 03.2012
- EN 1993-1-3 Eurocode 3: Design of steel structures – Part 1-3: General rules- Supplementary rules for cold-formed members and sheeting 03.2012
- EN 1993-1-5 Eurocode 3: Design of steel structures – Part 1-5: Plated structural elements 03.2012
- EN 1993-1-8 Eurocode 3: Design of steel structures – Part 1-8: Design of joints 03.2012
- EN 10025-2 Hot rolled products of structural steels- Part 2: technical delivery conditions for non-alloy structural steels 02.2005
- EAD 280016-00-0602: Products for installation systems for supporting technical building equipment

Load conditions:

- static loads

Product portfolio:

Item number	Description	Eurocode	ETA	EN 1090
2271514	MT-C-L1			
2271516	MT-C-L1 OC			
2271518	MT-C-L2			
2271519	MT-C-L2 OC			
2272047	MT-C-LL1			
2272049	MT-C-LL1 OC			
2272051	MT-C-LL2			
2272053	MT-C-LL2 OC			
2272054	MT-C-T/2			
2272055	MT-C-T/2 OC			
2272056	MT-C-T A			
2272057	MT-C-T A OC			
2272040	MT-C-T/1			
2272042	MT-C-T/1 OC			
2272058	MT-C-T 3D/2			
2272059	MT-C-T 3D/2 OC			
2272060	MT-C-T 3D/3			
2272061	MT-C-T 3D/3 OC			
2272115	MT-AB-LL2 45			

PRODUCT DATA QUALIFICATION

Design criteria used for loading capacity MT Connectors

Continues from previous page:

Item number	Description	Eurocode	ETA	EN 1090
2273585	MT-AB-LL2 45 OC		CE	
2272062	MT-ES-40		CE	
2272063	MT-ES-40 OC		CE	
2322415	MT-ES-60		Pending approval	
2322416	MT-ES-60 OC		Pending approval	
2272064	MT-C-GS OC		CE	EN 1090
2272066	MT-C-GL OC		CE	EN 1090
2272068	MT-C-GS A OC		CE	EN 1090
2272069	MT-C-GL A OC		CE	EN 1090
2272070	MT-U-GL1 OC		CE	EN 1090
2272073	MT-C-GSP L OC		CE	EN 1090
2272074	MT-C-GSP T OC		CE	EN 1090
2272075	MT-C-GLP T OC		CE	EN 1090
2272076	MT-ES-90 OC		CE	EN 1090
2272078	MT-ES-70 OC		CE	EN 1090
2272116	MT-AB-G T OC		CE	EN 1090
2272111	MT-AB A		CE	
2272112	MT-AB A OC		CE	
2272113	MT-AB-L 45		CE	
2272114	MT-AB-L 45 OC		CE	
2322432	MT-CC-BC 40/50		Pending approval	
2322401	MT-CC-BC 40/50 OC		Pending approval	
2322402	MT-CC-BS 40/50		Pending approval	
2322403	MT-CC-BS 40/50 OC		Pending approval	
2322427	MT-CC-30		Pending approval	
2322429	MT-CC-40/50		Pending approval	
2322391	MT-CC-40/50 OC		Pending approval	
2322396	MT-CC-60		Pending approval	
2322431	MT-CC-60 OC		Pending approval	
2322398	MT-CC-40D		Pending approval	
2322399	MT-CC-40D OC		Pending approval	
2322404	MT-CC-70 OC		Pending approval	

PRODUCT DATA QUALIFICATION

Design criteria used for loading capacity MT Connectors

Continues from previous page:

Item number	Description	Eurocode	ETA	EN 1090
2322392	MT-CC-40/50X2		Pending approval	
2322393	MT-CC-40/50X2 OC		Pending approval	
2322405	MT-CT-H2		Pending approval	
2322409	MT-CT-H2 OC		Pending approval	
2322408	MT-CT-H4		Pending approval	
2322412	MT-CT-H4 OC		Pending approval	
2322407	MT-CT-T		Pending approval	
2322411	MT-CT-T OC		Pending approval	
2322406	MT-CT-H5		Pending approval	
2322410	MT-CT-H5 OC		Pending approval	
2322417	MT-FTR-GS M12		Pending approval	
2322418	MT-FTR-GS M16		Pending approval	
2322421	MT-FTR-LS		Pending approval	
2322424	MT-FTR-LS OC		Pending approval	
2273645	MT-S-H1 M10		Pending approval	
2282199	MT-S-H1 M10 OC		Pending approval	
2273646	MT-S-H1 M12		Pending approval	
2282200	MT-S-H1 M12 OC		Pending approval	
2273647	MT-S-H2 M10		Pending approval	
2282201	MT-S-H2 M10 OC		Pending approval	
2273648	MT-S-H2 M12		Pending approval	
2282202	MT-S-H2 M12 OC		Pending approval	
2273649	MT-S-L 40		Pending approval	
2282203	MT-S-L 40 OC		Pending approval	
2273650	MT-S-L 60		Pending approval	
2282204	MT-S-L 60 OC		Pending approval	
2273651	MT-S-L 40D		Pending approval	
2282205	MT-S-L 40D OC		Pending approval	
2322419	MT-C-LS		Pending approval	
2322422	MT-C-LS OC		Pending approval	
2322420	MT-AB-LS		Pending approval	
2322423	MT-AB-LS OC		Pending approval	

PRODUCT DATA QUALIFICATION

Design criteria used for loading capacity MT Connectors

Continues from previous page:

Item number	Description	Eurocode	ETA	EN 1090
2322197	MT-CC-55D		Pending approval	
2322428	MT-CC-30D		Pending approval	
2322430	MT-CC-55		Pending approval	
2322395	MT-CC-55 OC		Pending approval	

PRODUCT DATA QUALIFICATION

Design criteria used for assessing product characteristics MT System Connectors



Methodology:

- Finite element analysis
- Hardware tests

Standards and codes:

- EN 1990 Basics of structural design 03.2003
- EN 1991-1-1 Eurocode 1: Actions on structures – Part 1-1: General actions – densities, self-weight, imposed loads for buildings 09.2011
- EN 1993-1-1 Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings 03.2012
- EN 1993-1-3 Eurocode 3: Design of steel structures – Part 1-3: General rules- Supplementary rules for cold-formed members and sheeting 03.2012
- EN 1993-1-5 Eurocode 3: Design of steel structures – Part 1-5: Plated structural elements 03.2012
- EN 1993-1-8 Eurocode 3: Design of steel structures – Part 1-8: Design of joints 03.2012
- EN 10025-2 Hot rolled products of structural steels- Part 2: technical delivery conditions for non-alloy structural steels 02.2005
- EAD 280016-00-0602: Products for installation systems for supporting technical building equipment



Load conditions:

- static loads

Product portfolio:

Item number	Description	Eurocode	ETA	EN 1090
2272080	MT-TL M10			
2272082	MT-TL M10 OC			
2273254	MT-TLB			
2273256	MT-TLB OC			
2272084	MT-TFB OC			
2282190	MT-TLB 30			
2282191	MT-TLB 30 OC			
2282198	MT-S-RS			
2273584	MT-S-RS OC			
2273630	MT-TL M8			
2273631	MT-TL M8 OC			
2273632	MT-TL M12			
2273633	MT-TL M12 OC			
2273634	MT-TL M16			
2273635	MT-TL M16 OC			
2273636	MT-TL 3/8			
2273637	MT-TL 3/8 OC			
2273638	MT-TL 1/2			
2273639	MT-TL 1/2 OC			

PRODUCT DATA QUALIFICATION

Design criteria used for loading capacity MT Connectors

Continues from previous page:

Item number	Description	Eurocode	ETA	EN 1090
2273653	MT-FP M6		CE	
2273654	MT-FP M6 OC		CE	
2273655	MT-FP M8		CE	
2273656	MT-FP M8 OC		CE	
2273657	MT-FP M10		CE	
2273658	MT-FP M10 OC		CE	
2273659	MT-FP M12		CE	
2273670	MT-FP M12 OC		CE	
2273671	MT-FP M16		CE	
2273672	MT-FP M16 OC		CE	
2283114	MT-ZW M8 OC*			
2283115	MT-ZW M10 OC*			
2283116	MT-ZW M12 OC*			
2283117	MT-ZW M16 OC*			
2281867	MT-FPT M8*			
2282192	MT-FPT M8 OC*			
2282193	MT-FPT M10*			
2282194	MT-FPT M10 OC*			
2282195	MT-FPT M12*			
2282196	MT-FPT M12 OC*			
2325248	MT-FTR-GSW*			
2332783	MT-C-GLP X A OC		Pending approval	
2332784	MT-C-GLP T A OC		Pending approval	
2332785	MT-C-GSP T A OC		Pending approval	
2332786	MT-C-GSP L A OC		Pending approval	
2332787	MT-B-GS AB OC		Pending approval	
2332789	MT-CTR-GS M12 OC		Pending approval	
2332790	MT-CTR-GS M16 OC		Pending approval	
2332791	MT-CTR-GS 1/2 OC		Pending approval	
2332792	MT-CTR-GS 5/8 OC		Pending approval	
2332793	MT-CTR-GL M12 OC		Pending approval	
2332796	MT-CTR-GL M16 OC		Pending approval	
2332794	MT-CTR-GL 1/2 OC		Pending approval	
2332795	MT-CTR-GL 5/8 OC		Pending approval	

PRODUCT DATA QUALIFICATION

Design criteria used for assessing product characteristics MT Brackets



Methodology:

- Finite element analysis
- Hardware tests



Standards and codes:

- EN 1990 Basics of structural design 03.2003
- EN 1991-1-1 Eurocode 1: Actions on structures – Part 1-1: General actions – densities, self-weight, imposed loads for buildings 09.2011
- EN 1993-1-1 Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings 03.2012
- EN 1993-1-3 Eurocode 3: Design of steel structures – Part 1-3: General rules- Supplementary rules for cold-formed members and sheeting 03.2012
- EN 1993-1-5 Eurocode 3: Design of steel structures – Part 1-5: Plated structural elements 03.2012
- EN 1993-1-8 Eurocode 3: Design of steel structures – Part 1-8: Design of joints 03.2012
- EN 10025-2 Hot rolled products of structural steels- Part 2: technical delivery conditions for non-alloy structural steels 02.2005
- EAD 280016-00-0602: Products for installation systems for supporting technical building equipment

Load conditions:

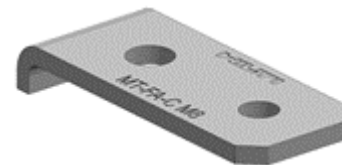
- static loads

Product portfolio:

Item number	Description	Eurocode	ETA	EN 1090
2271288	MT-BR-30 300			
2271289	MT-BR-30 300 OC			
2271440	MT-BR-30 450			
2271441	MT-BR-30 450 OC			
2271442	MT-BR-40 300			
2271443	MT-BR-40 300 OC			
2271444	MT-BR-40 450			
2271445	MT-BR-40 450 OC			
2271451	MT-BR-40 600			
2271452	MT-BR-40 600 OC			
2271446	MT-BR-40 1000			
2271447	MT-BR-40 1000 OC			
2271448	MT-BR-40D 600			
2271449	MT-BR-40D 600 OC			
2271450	MT-BR-40D 1000			
2271453	MT-BR-40D 1000 OC			
2271455	MT-BR-40 O4 600 OC			
2271456	MT-BR-40 O4 1000 OC			
2271459	MT-BR-40D O4 600 OC			
2271461	MT-BR-40D O4 1000 OC			
2271287	MT-BR-40D O4 1500 OC			

PRODUCT DATA QUALIFICATION

Design criteria used for assessing product characteristics MT Fixation elements



Methodology:

- Finite element analysis
- Hardware tests

Standards and codes:

- EN 1990 Basics of structural design 03.2003
- EN 1991-1-1 Eurocode 1: Actions on structures – Part 1-1: General actions – densities, self-weight, imposed loads for buildings 09.2011
- EN 1993-1-1 Eurocode 3: Design of steel structures – Part 1-1: General rules and rules for buildings 03.2012
- EN 1993-1-3 Eurocode 3: Design of steel structures – Part 1-3: General rules- Supplementary rules for cold-formed members and sheeting 03.2012
- EN 1993-1-5 Eurocode 3: Design of steel structures – Part 1-5: Plated structural elements 03.2012
- EN 1993-1-8 Eurocode 3: Design of steel structures – Part 1-8: Design of joints 03.2012
- EN 10025-2 Hot rolled products of structural steels- Part 2: technical delivery conditions for non-alloy structural steels 02.2005
- EAD 280016-00-0602: Products for installation systems for supporting technical building equipment



Load conditions:

- static loads

Product portfolio:

Item number	Description	Eurocode	ETA	EN 1090
2273686	MT-FA-C M8*			
2273687	MT-FA-C M8 OC*			
2273688	MT-FA-C M10*			
2273689	MT-FA-C M10 OC*			
2273690	MT-FA-C M12*			
2273691	MT-FA-C M12 OC*			
2273692	MT-FA-C M16*			
2273652	MT-FA-C M16 OC*			
2273681	MT-FA-G M10 3/8 OC			EN 1090
2273682	MT-FA-G M12 1/2 OC			EN 1090
2273683	MT-FA-G M16 5/8 OC			EN 1090
2273684	MT-FA-G M22 7/8 OC			EN 1090
2273685	MT-FA-G M24 1 OC			EN 1090
2273702	MT-FPS-GS OC			EN 1090
2273701	MT-FPS-GL OC			EN 1090