Deutsches Institut für Bautechnik

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Bautechnisches Prüfamt

An institution established by the Federal and Laender Governments

Designated according to Article 29 of Regulation (EU) No 305/2011 and member of EOTA (European Organisation for Technical Assessment)

European Technical Assessment ETA-21/0808 of 24 February 2022

English translation prepared by DIBt - Original version in German language

General Part

Technical Assessment Body issuing the European Technical Assessment:	Deutsches Institut für Bautechnik
Trade name of the construction product	Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D
Product family to which the construction product belongs	Products for installation systems for supporting technical building equipment
Manufacturer	Adolf Würth GmbH & Co. KG Reinhold-Würth-Straße 12-17 74653 Künzelsau DEUTSCHLAND
Manufacturing plant	Würth manufacturing plants
This European Technical Assessment contains	45 pages including 40 annexes which form an integral part of this assessment
This European Technical Assessment is issued in accordance with Regulation (EU) No 305/2011, on the basis of	EAD 280016-00-0602

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Specific Part

1 Technical description of the product

Objects of this European Technical Assessment are the channels Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D.

The channels are made of cold-formed steel sheeting's.

The Varifix® C-assembly rails 41/22/2,5, 41/41/2,5 and 41/62/3 has a single open section.

The Varifix® C-assembly rails 41/86/2 D and 41/128/2,5 D has an open built-up section made of two identical sections which are connected by clinching. They are available in two versions: perforated and non-perforated.

Annex A describes the dimensions and materials of the channels.

2 Specification of the intended use in accordance with the applicable European Assessment Document (EAD)

The performance given in Section 3 can only be assumed if the Varifix® C-assembly rails 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D are used in compliance with the specifications and under boundary conditions set out in Annex B.

The test and assessment methods on which this European Technical Assessment is based lead to an assumption of a working life of the Varifix® C-assembly rails 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D of at least 50 years. The indications given on the working life cannot be interpreted as a guarantee given by the producer, but are to be regarded only as a means for choosing the right products in relation to the expected economically reasonable working life of the works.

In accordance with the European Assessment Document EAD 280016-00-0602, the channels are intended to be used under dry indoor conditions for supporting:

- pipes for the transport of water not intended for human consumption,
- pipes for the transport of gas/fuel intended for the supply of building heating/cooling systems,
- technical building equipment in general,
- components of fixed fire-fighting systems.

The product is intended to be used where failure or excessive deformation of the installation systems would

- compromise safety in case of fire (BWR 2) or
- would lead to an unacceptable risk of accidents or damage in service or in operation (BWR 4).

3 Performance of the product and references to the methods used for its assessment

3.1 Safety in case of fire (BWR 2)

Essential characteristic	Performance
Reaction to fire	Class A1
Pull-through resistance of channel back holes under fire exposure	No performance assessed
Bending characteristics under fire exposure	see Annex C

3.2 Safety and accessibility in use (BWR 4)

Essential characteristic	Performance
Material and cross-section characteristics	see Annex B2
Characteristic pull-through resistance of channel back holes	No performance assessed

4 Assessment and verification of constancy of performance (AVCP) system applied, with reference to its legal base

In accordance with the European Assessment Document EAD 280016-00-0602 the applicable European legal act is:

For products for installation systems intended to be used for supporting pipes for the transport of water not intended for human consumption the applicable European legal act is Commission Decision 1999/472/EC, as amended by Commission Decision 2001/596/EC.

The system to be applied is 4. This includes uses that are subject to regulations on reaction to fire performance because the performance of the product is class A1 without the need to be tested for reaction to fire.

For products for installation systems intended to be used for supporting pipes for the transport of gas/fuel intended for the supply of building heating/cooling systems the applicable European legal act is Commission Decision 1999/472/EC, as amended by Commission Decision 2001/596/EC.

The system to be applied is 3.

For products for installation systems intended to be used for supporting technical building equipment in general the applicable European legal act is Commission Decision 97/161/EC.

The system to be applied is 2+.

For products for installation systems intended to be used for supporting components of fixed fire-fighting systems the applicable European legal act is Commission Decision 96/577/EC, as amended by Commission Decision 2002/592/EC.

The system to be applied is 1.

5 Technical details necessary for the implementation of the AVCP system, as provided for in the applicable Earopean Assessment Document

The technical details necessary for the implementation of the system for the assessment and verification of constancy of performance are laid down in the control plan (confidential part of this European Technical Assessment) deposited at Deutsches Institut für Bautechnik.

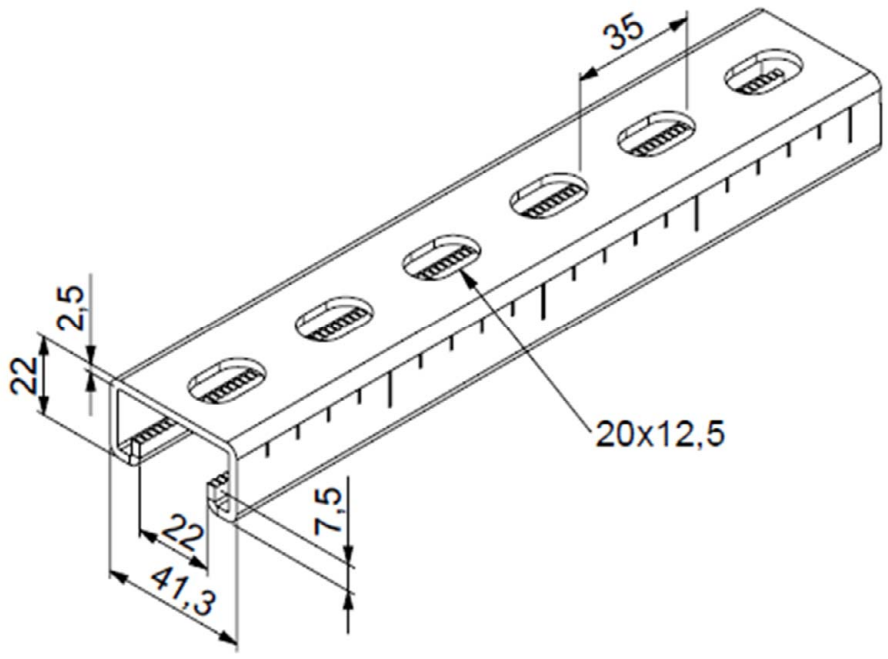
Issued in Berlin on 24 February 2022 by Deutsches Institut für Bautechnik

Dr.-Ing. Ronald Schwuchow
Head of Section

beglaubigt:
Stiller

Deutsches Institut für Bautechnik DIBt

Table A1: Dimensions and materials of the Varifix® C-assembly rail 41/22/2,5



Dimensions in mm

article number	title	length [m]	material
0862001005	Varifix® C-assembly rail 41/22/2,5 2M	2	S280GD + Z140-M-A-C according to EN 10346
0862001225	Varifix® C-assembly rail 41/22/2,5 3M	3	
0862001229	Varifix® C-assembly rail 41/22/2,5 6M	6	

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex A1**
Intended Use Dimensions and material	

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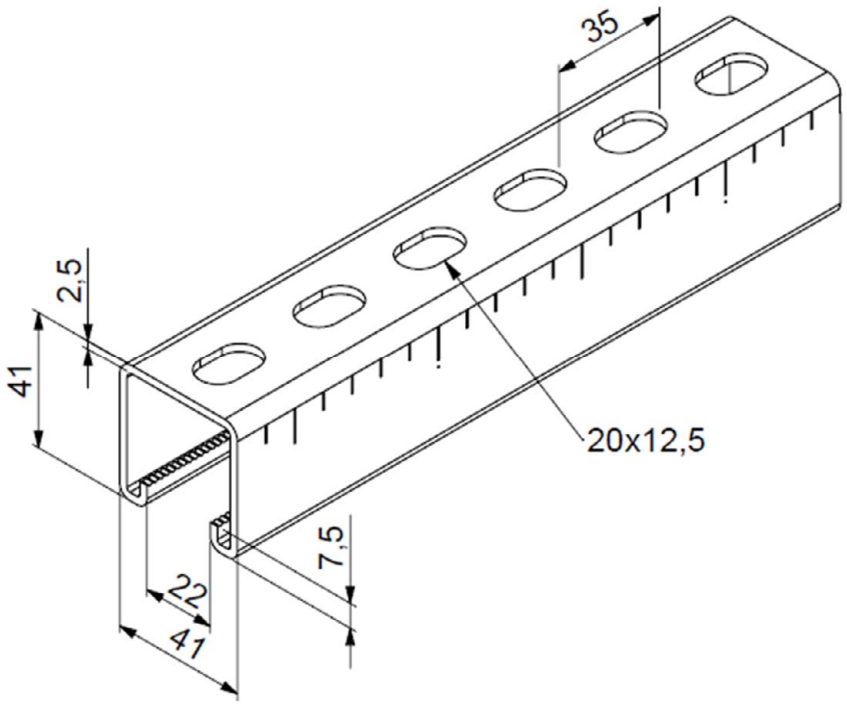
Table A2: Dimension and materials of the Varifix® C-assembly rail 41/41/2,5



Dimensions in mm

article number	title	length [m]	material
0862001006	Varifix® C-assembly rail 41/41/2,5 2M	2	S280GD + Z140-M-A-C according to EN 10346
0862001226	Varifix® C-assembly rail 41/41/2,5 3M	3	
0862001231	Varifix® C-assembly rail 41/41/2,5 6M	6	

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex A2**
Intended Use Dimensions and material	

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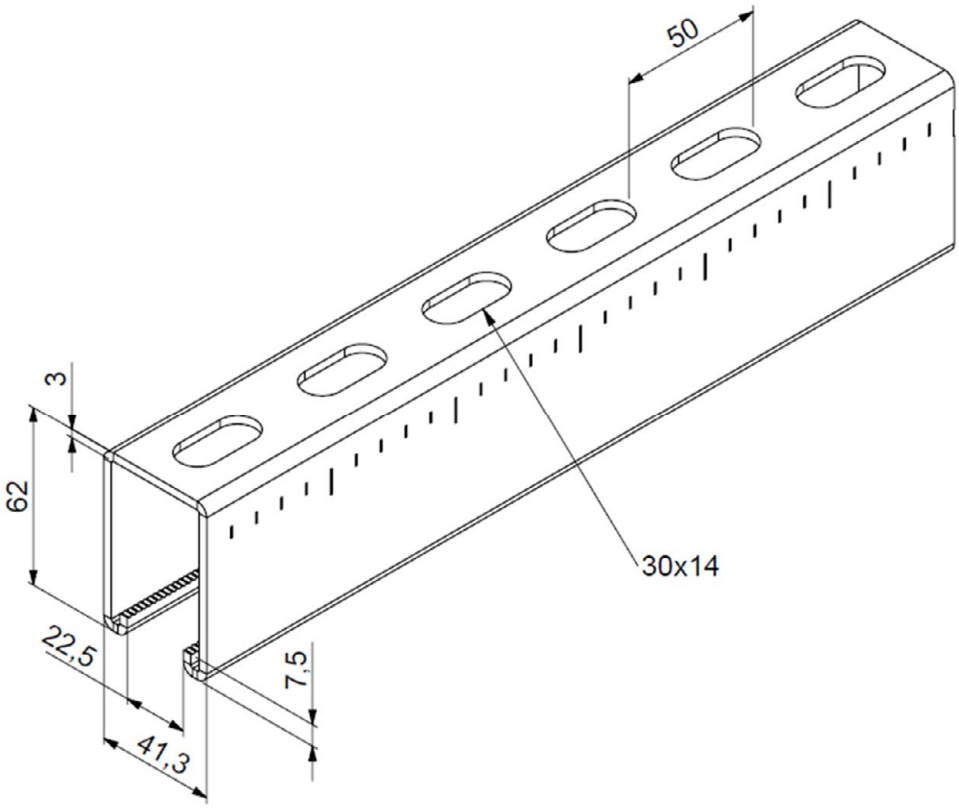
Table A3: Dimension and materials of the Varifix® C- assembly rail 41/62/3



Dimensions in mm

article number	title	length [m]	material
0862001242	Varifix® C-assembly rail 41/62/3 3M	3	S280GD + Z140-M-A-C according to EN 10346
0862001232	Varifix® C-assembly rail 41/62/3 6M	6	

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex A3**
Intended Use Dimensions and material	

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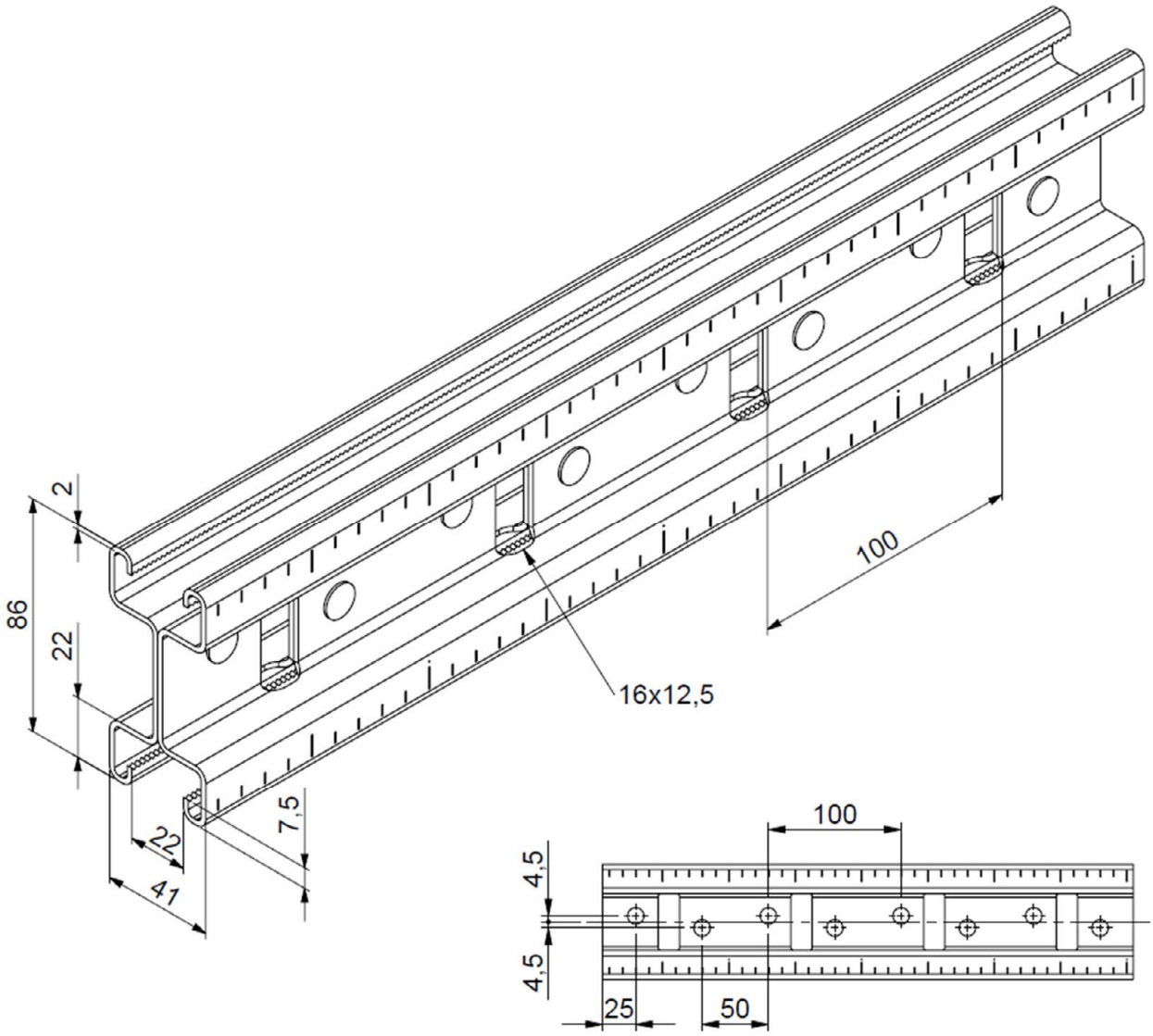
Table A4: Dimension and materials of the Varifix® C-assembly rail 41/86/2 D



Dimensions in mm

article number	title	length [m]	material
0862001300	Varifix® C-assembly rail 41/86/2 D 3M	3	S320GD + Z140-Z275-M-A-C according to EN 10346
0862001305	Varifix® C-assembly rail 41/86/2 D 6M	6	

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex A4**
Intended Use Dimensions and material	

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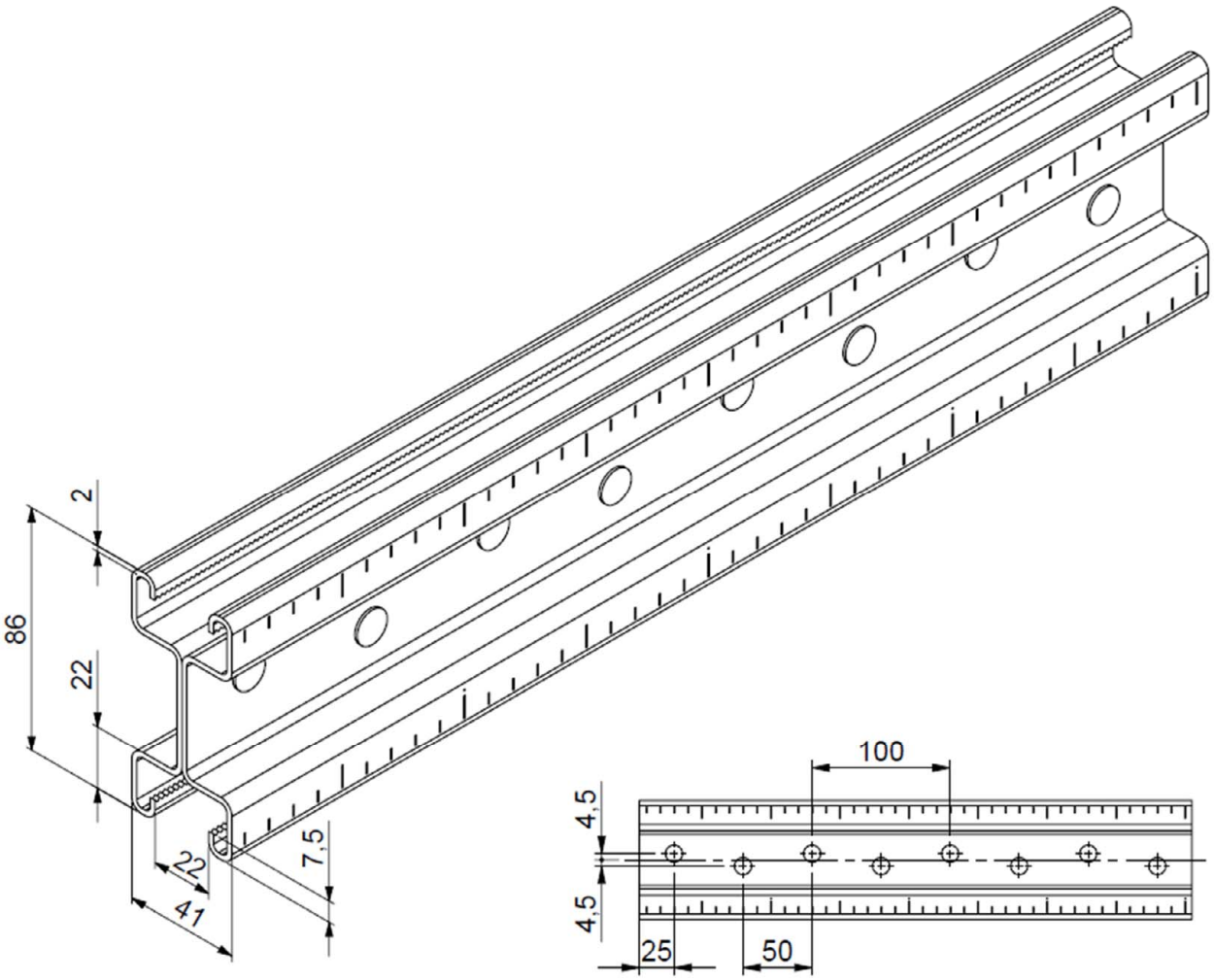
Table A5: Dimension and materials of the Varifix® C-assembly rail 41/86/2 D unperforated



Dimensions in mm

article number	title	length [m]	material
0862001310	Varifix® C-assembly rail 41/86/2 D unperforated 6M	6	S320GD + Z140-Z275-M-A-C according to EN 10346

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex A5**
Intended Use Dimensions and material	

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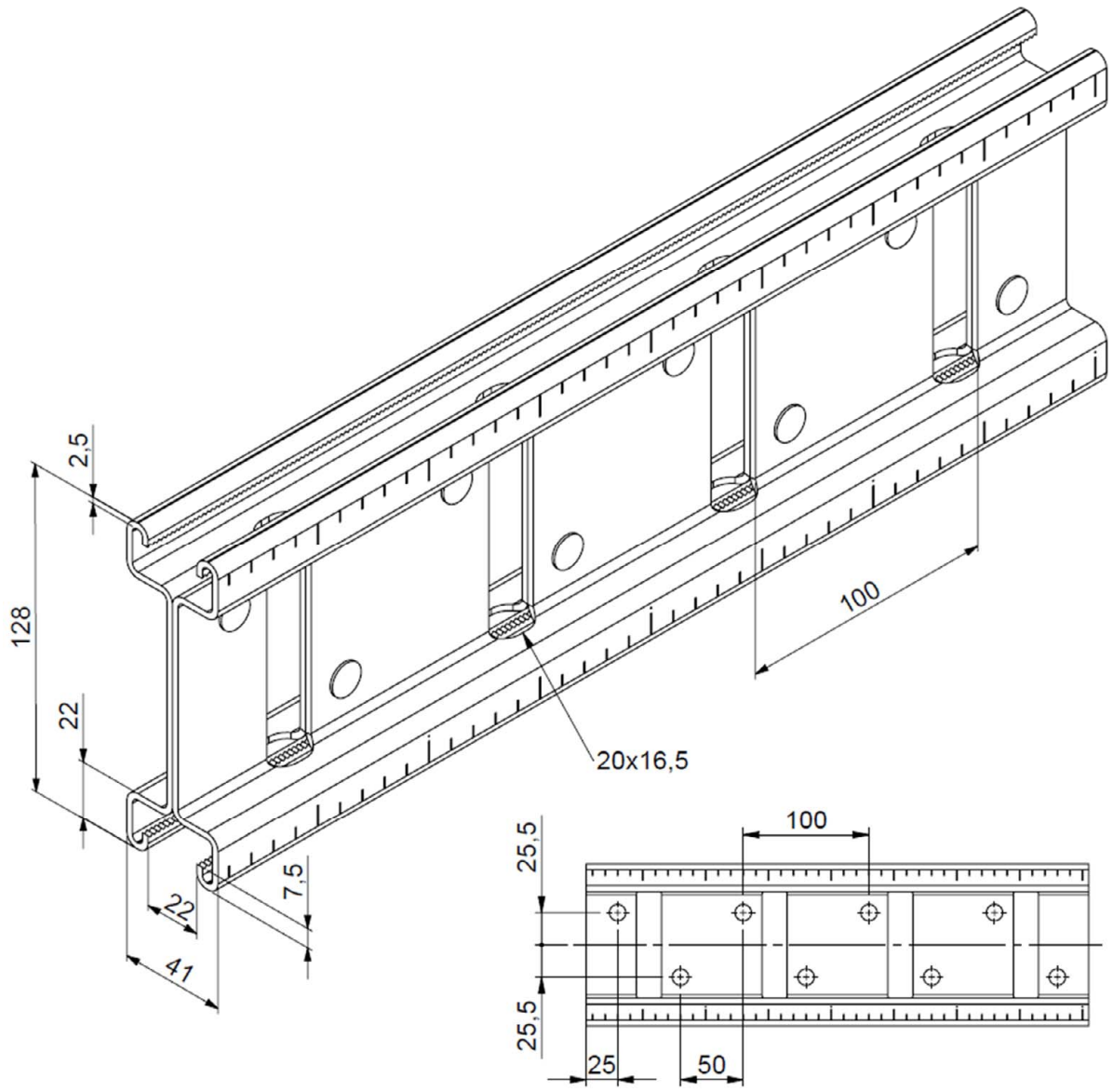
Table A6: Dimension and materials of the Varifix® C-assembly rail 41/128/2,5 D



Dimensions in mm

article number	title	length [m]	material
0862001330	Varifix® C-assembly rail 41/128/2,5 D 3M	3	S320GD + Z140-Z275-M-A-C according to EN 10346
0862001335	Varifix® C-assembly rail 41/128/2,5 D 6M	6	

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex A6**
Intended Use Dimensions and material	

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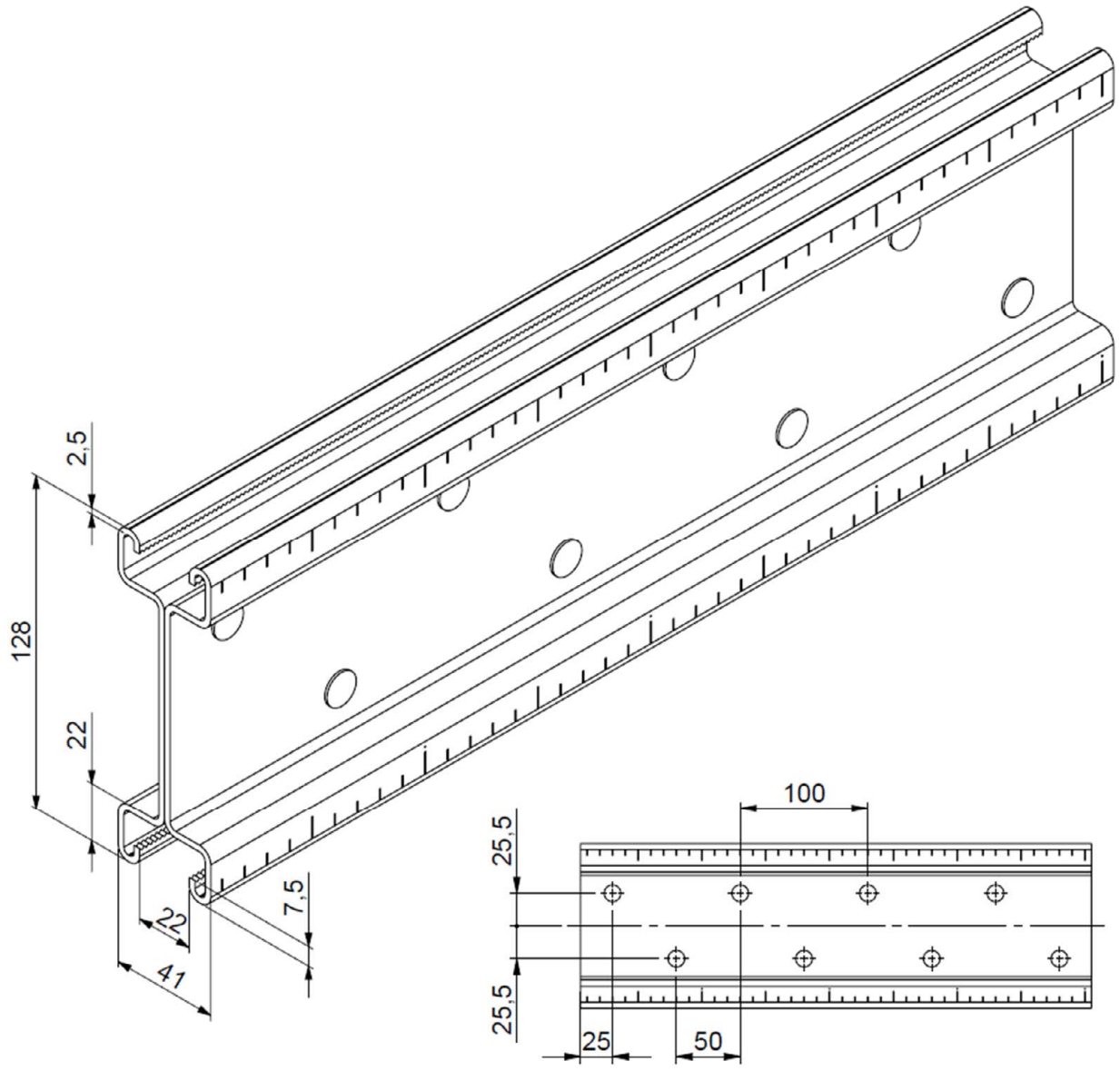
Table A7: Dimension and materials of the Varifix® C-assembly rail 41/128/2,5 D unperforated



Dimensions in mm

article number	title	length [m]	material
0862001340	Varifix® C-assembly rail 41/128/2,5 D unperforated 6M	6	S320GD + Z140-Z275-M-A-C according to EN 10346

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex A7**
Intended Use Dimensions and material	

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Prerequisite for the performance rating of the Varifix® C-assembly rails

- Würth Varifix® C-assembly rails 41/22/2,5; 41/41/2,5; 41/62/3,0; 41/86/2,0 D; 41/86/2,0 D unperforated; 41/128/2,5 D and 41/128/2,5 D unperforated, are used to transfer building services component loads such as pipes and equipment for sprinkler, water, heating, cooling, ventilation, electrical and other installations. The load-bearing performances given for Würth Varifix® C-assembly rails 41/22/2,5; 41/41/2,5; 41/62/3,0; 41/86/2,0 D; 41/86/2,0 D unperforated; 41/128/2,5 D and 41/128/2,5 D unperforated, apply to the conditions described in Section 2 of this European Technical Assessment.

- Würth Varifix® C-assembly rails 41/22/2, 5; 41/41/2,5; 41/62/3,0; 41/86/2,0 D; 41/86/2,0 D unperforated; 41/128/2,5 D and 41/128/2,5 D unperforated are used at ambient temperature and under fire exposure.

- The data on resistances and deformations at ambient temperature and at fire exposure apply to static and centric actions. The time data in connection with the resistance and deformation under the influence of fire refer to the boundary conditions of the standard temperature/time curve (STTC) accordance to EN 1363-1:2020.

- Würth Varifix® C-assembly rails 41/22/2.5; 41/41/2.5 and 41/62/3.0 mounted directly to the ceiling are designed with the channel profile open at the bottom. Components with proven fire protection on the underside are fastened with Würth Varifix® Systemfix 41 quick fasteners. For applications under fire exposure, the channels are anchored in the substrate with Varifix® retaining clips 41 and Varifix® retaining clip 41 heavy in conjunction with suitable fixings systems.

- For suspended channel systems, the track profiles are opened upwards or downwards. Fire-protected components arranged on the underside or top of suspended channel systems must be force-fitted with Varifix® retaining clips 41 or Varifix® retaining clip 41 heavy and nuts as well as threaded rods arranged on both sides. Alternatively, the design with Varifix® quick fastener Systemfix 41 is possible. The design of the junction point between the channel and the threaded rod for the suspension of the system is carried out with Varifix® retaining clip 41 and Varifix® retaining clip 41 heavy and nuts on both sides as well as threaded rods, which are connected non-positively.

- Threaded rods and other attachments (except Varifix® quick fastener Systemfix) are only to be guided through the unsawn long holes in the back of the channel.

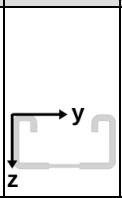
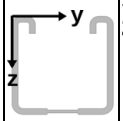
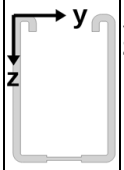
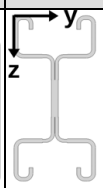
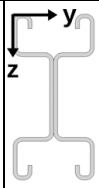
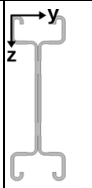
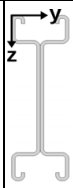
- The fastening elements for anchoring in the subfloor must be suitable for this purpose and must have a fire protection certificate.

- Before installation, it must be ensured that the components to be accommodated, the components of the installation system, the anchoring of the channels to the base material and the base material itself are suitable for accommodating the specified resistance values of the channels and the installation system and have fire protection verification.

- Appropriately, trained personnel under the supervision of the site manager must carry out installation. The general installation instructions of the manufacturer must be observed

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex B1**
Prerequisite for the performance rating	

Table B2: Cross-section values of the Varifix® C-assembly rail

Description	Symbol	41/22/2,5	41/41/2,5	41/62/3,0	41/86/2,0 perforated	41/86/2,0 non-perforated	41/128/2,5 perforated	41/128/2,5 non-perforated	Unit
									
Cross-section class acc. EN 1993-1-1	-	3	3	3	3	3	3	3	-
Cross-sectional area	A	230,34	321,66	501,35	516,47	547,36	776,54	869,91	mm^2
	A_{geom}	230,34	321,66	501,35	516,47	547,36	776,54	869,91	mm^2
Shear areas	A_y	50,67	45,22	45,28	81,57	85,05	71,34	79,84	mm^2
	A_z	69,05	163,16	317,16	190,45	213,37	394,98	476,25	mm^2
Centroid position	$y_{C,0}$	20,65	20,50	20,65	20,50	20,50	20,50	20,50	mm
	$z_{C,0}$	12,28	21,89	32,69	43,00	43,00	64,00	64,00	mm
Moments of inertia	I_y	13997,46	67608,80	223517,92	392517,43	398896,44	1,38E+06	1,45E+06	mm^4
	I_z	58051,01	91135,91	153809,41	29270,75	31966,28	46035,65	50621,47	mm^4
Inclination of principal axes	a	0,00	0,00	0,00	0,00	0,00	0,00	0,00	°
Polar moments of inertia	I_p	72048,47	158740	377327,33	421788,18	430862,72	1,43E+06	1,50E+06	mm^4
	$I_{p,M}$	170770	683810	2,203E+06	421788,1	430862,72	1,43E+06	1,50E+06	mm^4
Radii of gyration	i_y	7,80	14,50	21,11	27,57	27,00	42,18	40,86	mm
	i_z	15,88	16,83	17,52	7,53	7,64	7,70	7,63	mm
Polar radii of gyration	i_p	17,69	22,22	27,43	28,58	28,06	42,87	41,56	mm
	$r_{p,M}$	27,23	46,11	66,29	28,58	28,06	42,87	41,56	mm
Warping radius of gyration	$i_{\omega,M}$	6,71	7,16	6,92	6,34	6,27	7,40	7,23	mm
Cross-section weight	G	1,81	2,52	3,94	4,10	4,30	6,10	6,80	kg/m
Cross-section perimeter	U	203,85	277,15	358,33	556,51	481,31	707,79	705,43	mm
Torsional constant	I_t	351,29	520,90	1234,12	453,03	538,17	960,35	1384,74	mm^4
Secondary torsional constant	$I_{t,s}$	41348,41	91982,58	162923,28	13879,19	15539,32	9792,70	11785,10	mm^4
Location of the shear centre	$y_{M,0}$	20,65	20,50	20,65	20,50	20,50	20,50	20,50	mm
	$z_{M,0}$	32,98	62,29	93,03	43,00	43,00	64,00	64,00	mm
	y_M	0,00	0,00	0,00	0,00	0,00	0,00	0,00	mm
	z_M	20,70	40,40	60,34	0,00	0,00	0,00	0,00	mm
Warping constants	$I_{\omega,S}$	3,26E+07	1,84E+08	6,665E+08	1,69E+07	1,70E+07	7,82E+07	7,85E+07	mm^6
	$I_{\omega,M}$	7,70E+06	3,50E+07	1,054E+08	1,69E+07	1,70E+07	7,82E+07	7,85E+07	mm^6
Auxiliary value for warp rotation	$r_{\omega,M}$	0,00	0,00	0,004	0,00	0,00	0,00	0,00	
Section moduli	$W_{y,max}$	1439,44	3537,34	7626,56	9128,31	9276,66	21582,74	22690,30	mm^3
	$W_{y,min}$	-1140,25	-3088,98	-6837,05	-9128,31	-9276,66	-21582,74	-22690,30	mm^3
	$W_{z,max}$	2811,19	4445,65	7448,40	1427,84	1559,33	2245,64	2,47E+03	mm^3
	$W_{z,min}$	-2811,19	-4445,65	-7448,40	-1427,84	-1559,33	-2245,64	-2469,34	mm^3
Warping section moduli	$W_{\omega,M,max}$	22520,44	49987,19	99684,11	24936,03	24959,09	58784,62	58995,50	mm^4
	$W_{\omega,M,min}$	-22536,00	-50015,00	-99724,72	-24936,03	-24959,09	-58784,61	-58995,48	mm^4
Torsional section modulus	W_t	140,51	208,36	411,37	226,51	269,08	384,14	553,90	mm^3
Buckling curve	BC_y	c	c	c	c	c	c	c	-
	BC_z	c	c	c	c	c	c	c	-

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Cross-section values

Annex B2

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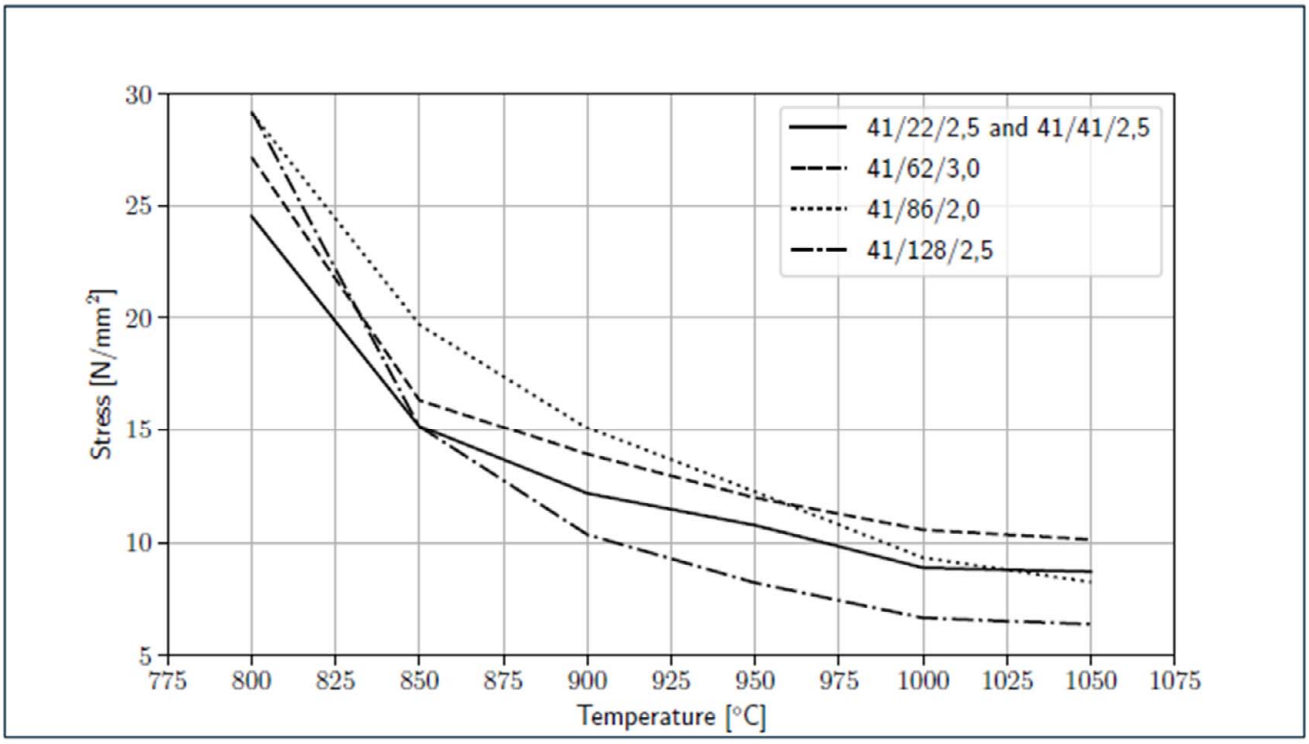
Table C1.1: Channel material stress[8)] at different component temperatures and $\varepsilon_{B,\theta a}$ = 2%

Temperature [°C]	Stress [N/mm²]			
	41/22/2,5 und 41/41/2,5	41/62/3,0	41/86/2,0	41/128/2,5
800	24,51	27,14	29,11	29,2
842*	16,65	18,06	21,2	17,38
850	15,16	16,33	19,69	15,13
900	12,17	13,91	15,08	10,34
945*	10,9	12,17	12,52	8,42
950	10,76	11,97	12,23	8,21
1000	8,88	10,55	9,32	6,66
1006*	8,86	10,5	9,19	6,63
1049*	8,71	10,14	8,26	6,39
1050	8,7	10,13	8,24	6,38



[8)] determined based on unsteady thermal creep tests
[*)] interpolated values of the channel material stress

Table C1.2: Temperatures[9)] at 30, 60, 90 and 120 minutes according to standard temperature / time curve (STTC)

Time acc. to STTC [Min]	30	60	90	120
Temperature [°C]	842	945	1006	1049

[9)] Furnace temperatures according to STTC
It can be assumed that the component temperature corresponds to the furnace temperature.

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex C1**
Stress-strain behaviour of channel material under fire exposure	

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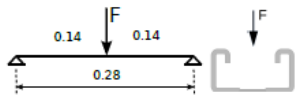
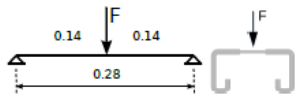
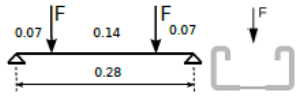
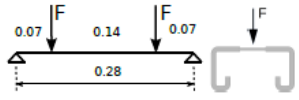
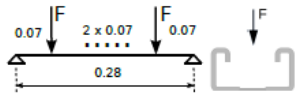
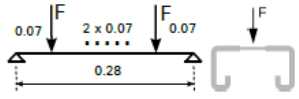
Table C2: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/22/2,5 with a support span of 0,28 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	79,16	14,61	120,00	1,25	6,28	12,42	14,61
	10	1/2	160,59	20,95	120,00	3,59	10,46	18,50	20,95
	15	1/2	242,02	30,53	120,00	6,19	16,45	27,50	30,53
	20	1/2	323,45	44,27	120,00	9,36	24,00	38,86	44,27
	25	1/2	404,88	58,48	120,00	13,40	32,44	50,58	58,48
	30	1/2	486,31	70,68	120,00	18,21	41,04	61,24	70,68
	5	1/2	79,16	14,62	120,00	1,27	6,30	12,44	14,62
	10	1/2	160,59	21,25	120,00	3,66	10,68	18,84	21,25
	15	1/2	242,02	31,38	120,00	6,34	16,96	28,33	31,38
	20	1/2	323,45	46,50	120,00	9,69	25,03	40,61	46,50
	25	1/2	404,88	61,81	120,00	14,00	34,06	53,15	61,81
	30	1/2	486,31	75,04	120,00	19,21	43,28	64,52	75,04
	5	3/4	79,16	15,44	120,00	1,87	6,99	13,22	15,44
	10	3/4	160,59	26,65	120,00	5,27	14,17	23,96	26,65
	15	3/4	242,02	39,60	120,00	9,00	22,60	35,65	39,60
	20	3/4	323,45	53,79	120,00	14,03	31,95	47,63	53,79
	25	3/4	404,88	64,16	120,00	19,85	40,32	56,99	64,16
	30	3/4	486,31	71,91	120,00	26,14	47,53	64,43	71,91
	5	3/4	79,16	15,49	120,00	1,92	7,04	13,27	15,49
	10	3/4	160,59	27,76	120,00	5,50	14,85	25,11	27,76
	15	3/4	242,02	43,26	120,00	9,57	24,60	38,86	43,26
	20	3/4	323,45	59,36	120,00	15,35	35,45	52,52	59,36
	25	3/4	404,88	70,45	120,00	22,19	44,93	62,70	70,45
	30	3/4	486,31	78,76	120,00	29,85	52,89	70,74	78,76
	5	2/3	39,58	14,88	120,00	1,48	6,53	12,68	14,88
	10	2/3	80,30	23,38	120,00	4,29	11,97	20,81	23,38
	15	2/3	121,01	34,95	120,00	7,32	19,09	31,37	34,95
	20	2/3	161,72	50,42	120,00	11,28	27,89	43,90	50,42
	25	2/3	202,44	63,28	120,00	16,23	36,76	54,98	63,28
	30	2/3	243,15	73,44	120,00	21,96	45,05	64,35	73,44
	5	2/3	39,58	14,99	120,00	1,58	6,63	12,79	14,99
	10	2/3	80,30	24,36	120,00	4,59	12,68	21,86	24,36
	15	2/3	121,01	37,05	120,00	7,88	20,61	33,52	37,05
	20	2/3	161,72	53,30	120,00	12,32	30,37	46,91	53,30
	25	2/3	202,44	66,08	120,00	17,91	39,82	58,12	66,08
	30	2/3	243,15	76,00	120,00	24,39	48,29	67,27	76,00

Description

$\varepsilon_{B,\theta a}$	Channel bending strain under fire exposure θ_a
σ_B	Channel bending stress
V	Moment degree of fullness without contribution from channel deadweight
F	Value of the designated system single load
$\delta_{tmax,B}$	Deformation of the channel at the point in time of stability failure or of the plastic hinging
$t_{max,B}$	Time in which loss of rigidity or plastic hinging of the channel occurs under bending stress
δ_{30}	Displacement after exposure time of 30 minutes to elevated temperatures
δ_{60}	Displacement after exposure time of 60 minutes to elevated temperatures
δ_{90}	Displacement after exposure time of 90 minutes to elevated temperatures
δ_{120}	Displacement after exposure time of 120 minutes to elevated temperatures

Thermal analyses as well as calculations are referring to the boundary conditions of STTC.

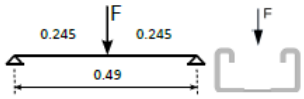
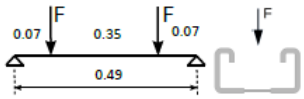
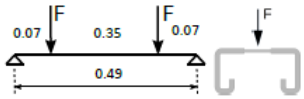
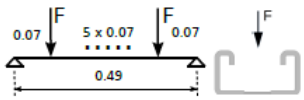
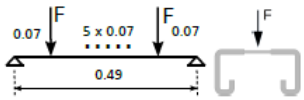
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C2

Deutsches Institut für Bautechnik DIBt

Table C3: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/22/2,5 with a support span of 0,49 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	42,56	17,72	120,00	3,82	9,02	15,34	17,72
	10	1/2	89,10	37,13	120,00	10,86	21,90	34,06	37,13
	15	1/2	135,63	62,39	120,00	18,53	38,87	57,88	62,39
	20	1/2	182,16	89,37	120,00	27,74	57,09	81,04	89,37
	25	1/2	228,69	111,87	120,00	38,60	73,65	100,47	111,87
	30	1/2	275,22	129,39	120,00	50,11	88,08	116,38	129,39
	5	1/2	42,56	17,79	120,00	3,88	9,09	15,41	17,79
	10	1/2	89,10	37,87	120,00	11,03	22,42	34,86	37,87
	15	1/2	135,63	64,07	120,00	18,88	39,94	59,44	64,07
	20	1/2	182,16	92,73	120,00	28,47	58,85	83,73	92,73
	25	1/2	228,69	115,85	120,00	39,77	76,05	103,80	115,85
	30	1/2	275,22	134,10	120,00	51,83	91,08	120,32	134,10
	5	6/7	74,49	20,75	120,00	6,07	11,60	18,22	20,75
	10	6/7	155,92	53,23	120,00	17,04	33,88	49,45	53,23
	15	6/7	237,35	75,50	120,00	27,82	51,95	70,30	75,50
	20	6/7	318,77	91,70	120,00	40,03	66,53	85,19	91,70
	25	6/7	400,20	104,09	120,00	51,08	77,73	96,60	104,09
	30	6/7	481,63	113,51	120,00	60,46	86,44	105,47	113,51
	5	6/7	74,49	20,87	120,00	6,16	11,71	18,34	20,87
	10	6/7	155,92	55,45	120,00	17,54	35,29	51,55	55,45
	15	6/7	237,35	78,93	120,00	29,05	54,47	73,38	78,93
	20	6/7	318,77	95,92	120,00	42,22	69,67	88,88	95,92
	25	6/7	400,20	108,46	120,00	53,89	81,12	100,46	108,46
	30	6/7	481,63	117,97	120,00	63,64	90,03	109,51	117,97
	5	2/3	12,41	19,18	120,00	4,91	10,24	16,72	19,18
	10	2/3	25,99	45,94	120,00	13,77	27,66	42,15	45,94
	15	2/3	39,56	71,15	120,00	22,89	45,76	65,34	71,15
	20	2/3	53,13	93,18	120,00	33,77	62,48	84,52	93,18
	25	2/3	66,70	110,41	120,00	45,21	76,24	99,78	110,41
	30	2/3	80,27	123,69	120,00	55,99	87,56	111,91	123,69
	5	2/3	12,41	19,60	120,00	5,22	10,62	17,14	19,60
	10	2/3	25,99	48,64	120,00	14,73	29,95	45,15	48,64
	15	2/3	39,56	74,70	120,00	24,67	49,46	69,24	74,70
	20	2/3	53,13	96,76	120,00	36,76	66,77	88,48	96,76
	25	2/3	66,70	113,33	120,00	49,00	80,37	103,29	113,33
	30	2/3	80,27	125,93	120,00	60,10	91,40	114,89	125,93

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex C3**
Bending characteristic of the channel under fire exposure	

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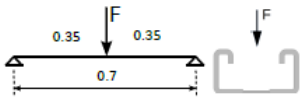
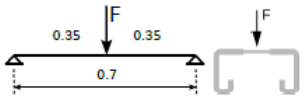
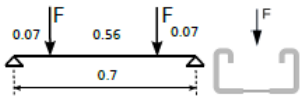
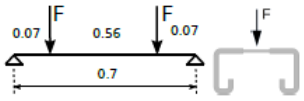
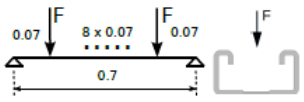
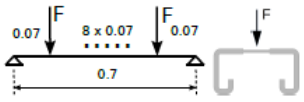
Table C4: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/22/2,5 with a support span of 0,7 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	26,91	22,89	120,00	8,07	13,56	20,18	22,89
	10	1/2	59,48	61,72	120,00	22,35	39,76	57,72	61,72
	15	1/2	92,05	103,21	120,00	37,31	69,89	96,84	103,21
	20	1/2	124,62	139,41	120,00	54,11	97,30	128,74	139,41
	25	1/2	157,19	169,09	120,00	72,04	120,35	154,78	169,09
	30	1/2	189,76	192,30	120,00	89,38	139,77	175,85	192,30
	5	1/2	26,91	23,02	120,00	8,17	13,69	20,32	23,02
	10	1/2	59,48	62,89	120,00	22,64	40,57	58,93	62,89
	15	1/2	92,05	105,55	120,00	37,88	71,43	99,01	105,55
	20	1/2	124,62	143,50	120,00	55,26	99,75	132,13	143,50
	25	1/2	157,19	173,35	120,00	73,78	123,31	158,45	173,35
	30	1/2	189,76	196,57	120,00	91,62	143,02	179,64	196,57
	5	9/10	67,27	28,50	120,00	12,33	18,39	25,53	28,50
	10	9/10	148,69	82,00	120,00	33,67	57,27	76,75	82,00
	15	9/10	230,12	111,16	120,00	51,42	81,83	103,99	111,16
	20	9/10	311,55	129,69	120,00	67,78	98,79	121,48	129,69
	25	9/10	392,98	143,15	120,00	81,61	111,90	134,31	143,15
	30	9/10	474,41	153,64	120,00	92,84	122,38	144,41	153,64
	5	9/10	67,27	28,77	120,00	12,49	18,60	25,79	28,77
	10	9/10	148,69	85,09	120,00	34,58	59,30	79,49	85,09
	15	9/10	230,12	115,09	120,00	53,22	84,63	107,38	115,09
	20	9/10	311,55	134,16	120,00	70,46	102,06	125,29	134,16
	25	9/10	392,98	148,09	120,00	84,75	115,45	138,49	148,09
	30	9/10	474,41	158,92	120,00	96,23	126,08	148,91	158,92
	5	2/3	5,38	25,95	120,00	10,24	16,06	23,08	25,95
	10	2/3	11,90	73,15	120,00	27,48	48,20	67,81	73,15
	15	2/3	18,41	107,33	120,00	43,62	74,86	99,44	107,33
	20	2/3	24,92	131,95	120,00	60,07	95,61	121,85	131,95
	25	2/3	31,44	152,04	120,00	75,54	112,46	139,85	152,04
	30	2/3	37,95	168,40	120,00	89,00	126,23	154,72	168,40
	5	2/3	5,38	26,91	120,00	10,92	16,90	24,03	26,91
	10	2/3	11,90	77,14	120,00	29,34	51,99	72,18	77,14
	15	2/3	18,41	111,09	120,00	46,55	79,29	103,67	111,09
	20	2/3	24,92	135,19	120,00	64,09	100,02	125,62	135,19
	25	2/3	31,44	154,54	120,00	79,90	116,52	143,01	154,54
	30	2/3	37,95	170,27	120,00	93,37	129,90	157,33	170,27

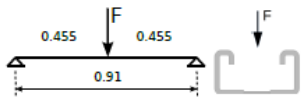
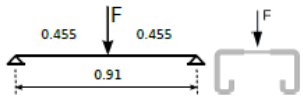
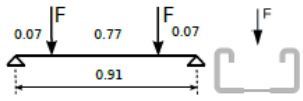
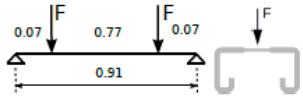
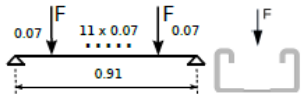
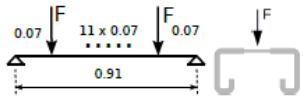
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C4

Deutsches Institut für Bautechnik DIBt

Table C5: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/22/2,5 with a support span of 0,91 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	17,69	30,43	120,00	14,26	20,19	27,26	30,43
	10	1/2	42,75	93,22	120,00	38,12	63,46	87,93	93,22
	15	1/2	67,80	149,25	120,00	61,67	106,24	140,63	149,25
	20	1/2	92,85	192,76	120,00	86,08	141,28	179,80	192,76
	25	1/2	117,91	228,68	120,00	110,34	170,28	211,80	228,68
	30	1/2	142,96	257,68	120,00	132,76	194,76	238,41	257,68
	5	1/2	17,69	30,69	120,00	14,44	20,42	27,52	30,69
	10	1/2	42,75	95,01	120,00	38,59	64,70	89,73	95,01
	15	1/2	67,80	152,10	120,00	62,57	108,35	143,35	152,10
	20	1/2	92,85	196,88	120,00	87,74	144,26	183,39	196,88
	25	1/2	117,91	232,95	120,00	112,59	173,44	215,45	232,95
	30	1/2	142,96	261,85	120,00	135,34	197,89	241,97	261,85
	5	12/13	57,49	38,29	120,00	20,30	26,99	34,74	38,29
	10	12/13	138,92	111,35	120,00	53,33	81,61	104,43	111,35
	15	12/13	220,35	147,09	120,00	77,06	112,03	137,78	147,09
	20	12/13	301,78	169,24	120,00	96,21	132,06	158,73	169,24
	25	12/13	383,21	185,03	120,00	112,14	147,04	173,89	185,03
	30	12/13	464,64	197,13	120,00	125,26	159,09	185,69	197,13
	5	12/13	57,49	38,75	120,00	20,55	27,32	35,19	38,75
	10	12/13	138,92	115,25	120,00	54,72	84,21	107,82	115,25
	15	12/13	220,35	151,58	120,00	79,42	115,22	141,57	151,58
	20	12/13	301,78	174,34	120,00	99,37	135,63	162,98	174,34
	25	12/13	383,21	190,79	120,00	115,77	151,00	178,69	190,79
	30	12/13	464,64	203,43	120,00	129,13	163,38	190,97	203,43
	5	2/3	2,74	36,61	120,00	18,21	24,93	33,10	36,61
	10	2/3	6,62	103,58	120,00	45,50	72,36	96,17	103,58
	15	2/3	10,49	144,12	120,00	68,13	105,00	133,64	144,12
	20	2/3	14,37	171,65	120,00	88,36	128,49	159,19	171,65
	25	2/3	18,25	193,21	120,00	106,33	147,39	179,10	193,21
	30	2/3	22,13	211,37	120,00	121,80	163,29	195,81	211,37
	5	2/3	2,74	39,00	120,00	19,68	26,87	35,48	39,00
	10	2/3	6,62	108,81	120,00	48,74	77,76	101,86	108,81
	15	2/3	10,49	148,40	120,00	72,38	110,25	138,47	148,40
	20	2/3	14,37	175,06	120,00	93,33	133,36	163,20	175,06
	25	2/3	18,25	195,97	120,00	111,39	151,83	182,53	195,97
	30	2/3	22,13	213,49	120,00	126,65	167,29	198,72	213,49

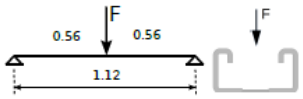
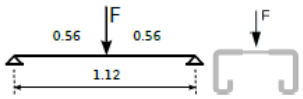
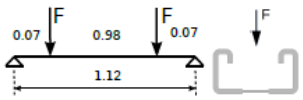
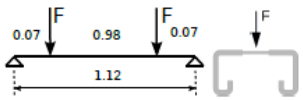
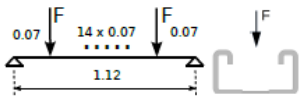
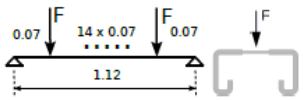
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C5

Deutsches Institut für Bautechnik DIBt

Table C6: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/22/2,5 with a support span of 1,12 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	11,29	40,90	120,00	22,79	29,37	37,10	40,90
	10	1/2	31,65	130,17	120,00	58,16	92,21	123,20	130,17
	15	1/2	52,01	198,95	120,00	90,70	146,23	187,72	198,95
	20	1/2	72,36	248,63	120,00	122,03	187,84	233,32	248,63
	25	1/2	92,72	290,04	120,00	151,93	222,51	270,80	290,04
	30	1/2	113,08	325,32	120,00	179,02	252,49	303,51	325,32
	5	1/2	11,29	41,36	120,00	23,09	29,75	37,54	41,36
	10	1/2	31,65	132,69	120,00	58,91	94,01	125,72	132,69
	15	1/2	52,01	202,11	120,00	92,02	148,86	190,83	202,11
	20	1/2	72,36	252,49	120,00	124,19	191,10	236,82	252,49
	25	1/2	92,72	294,31	120,00	154,54	225,69	274,40	294,31
	30	1/2	113,08	329,78	120,00	181,90	255,69	307,29	329,78
	5	15/16	45,17	49,78	120,00	29,69	37,08	45,55	49,78
	10	15/16	126,60	142,56	120,00	74,74	107,04	133,79	142,56
	15	15/16	208,03	185,06	120,00	103,91	143,39	173,46	185,06
	20	15/16	289,46	210,93	120,00	126,01	166,82	197,98	210,93
	25	15/16	370,89	229,30	120,00	143,84	184,18	215,66	229,30
	30	15/16	452,31	243,35	120,00	158,69	197,97	229,39	243,35
	5	15/16	45,17	50,46	120,00	30,03	37,55	46,20	50,46
	10	15/16	126,60	147,05	120,00	76,65	110,14	137,71	147,05
	15	15/16	208,03	190,08	120,00	106,77	146,90	177,69	190,08
	20	15/16	289,46	216,72	120,00	129,48	170,75	202,80	216,72
	25	15/16	370,89	235,99	120,00	147,81	188,59	221,21	235,99
	30	15/16	452,31	250,81	120,00	163,03	202,85	235,62	250,81
	5	2/3	1,41	51,74	120,00	28,93	37,17	47,37	51,74
	10	2/3	3,96	134,08	120,00	66,12	97,43	124,57	134,08
	15	2/3	6,50	179,49	120,00	93,81	134,43	166,52	179,49
	20	2/3	9,05	210,38	120,00	116,65	160,59	195,28	210,38
	25	2/3	11,59	234,13	120,00	136,25	181,29	217,49	234,13
	30	2/3	14,13	253,86	120,00	153,27	198,81	235,97	253,86
	5	2/3	1,41	56,26	120,00	31,49	40,68	51,89	56,26
	10	2/3	3,96	139,75	120,00	70,52	103,56	130,66	139,75
	15	2/3	6,50	183,65	120,00	98,73	139,76	171,21	183,65
	20	2/3	9,05	213,50	120,00	121,70	165,19	198,99	213,50
	25	2/3	11,59	236,43	120,00	141,17	185,31	220,47	236,43
	30	2/3	14,13	255,51	120,00	157,88	202,35	238,36	255,51

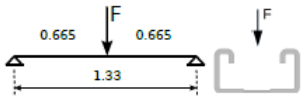
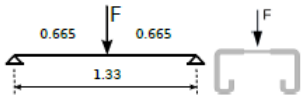
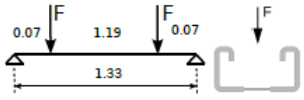
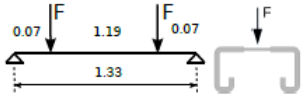
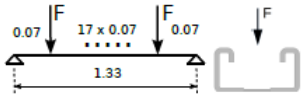
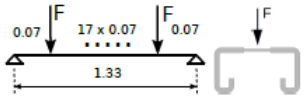
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C6

Deutsches Institut für Bautechnik DIBt

Table C7: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/22/2,5 with a support span of 1,33 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	6,38	55,03	120,00	34,18	41,71	50,40	55,03
	10	1/2	23,52	171,33	120,00	82,36	125,14	162,32	171,33
	15	1/2	40,66	251,17	120,00	123,53	188,86	237,07	251,17
	20	1/2	57,81	306,68	120,00	161,01	236,47	288,80	306,68
	25	1/2	74,95	353,40	120,00	196,02	276,75	331,90	353,40
	30	1/2	92,09	395,19	120,00	227,70	312,83	371,12	395,19
	5	1/2	6,38	55,81	120,00	34,64	42,32	51,16	55,81
	10	1/2	23,52	174,62	120,00	83,47	127,55	165,57	174,62
	15	1/2	40,66	254,60	120,00	125,28	191,96	240,51	254,60
	20	1/2	57,81	310,48	120,00	163,59	239,86	292,34	310,48
	25	1/2	74,95	357,82	120,00	198,91	280,07	335,65	357,82
	30	1/2	92,09	400,07	120,00	230,89	316,34	375,24	400,07
	5	18/19	30,30	62,70	120,00	40,20	48,40	57,70	62,70
	10	18/19	111,73	176,32	120,00	97,49	134,16	165,52	176,32
	15	18/19	193,16	226,52	120,00	132,15	176,92	212,40	226,52
	20	18/19	274,59	256,41	120,00	157,38	203,99	240,83	256,41
	25	18/19	356,01	277,47	120,00	177,22	223,89	261,15	277,47
	30	18/19	437,44	293,51	120,00	193,70	239,65	276,88	293,51
	5	18/19	30,30	63,58	120,00	40,63	48,97	58,54	63,58
	10	18/19	111,73	181,31	120,00	99,79	137,70	169,95	181,31
	15	18/19	193,16	232,05	120,00	135,26	180,75	217,12	232,05
	20	18/19	274,59	262,87	120,00	161,06	208,30	246,26	262,87
	25	18/19	356,01	285,00	120,00	181,40	228,81	267,47	285,00
	30	18/19	437,44	302,06	120,00	198,36	245,18	284,08	302,06
	5	2/3	0,67	72,17	120,00	42,72	53,26	66,65	72,17
	10	2/3	2,48	164,47	120,00	88,34	122,60	152,67	164,47
	15	2/3	4,29	213,90	120,00	119,92	163,06	198,33	213,90
	20	2/3	6,10	247,90	120,00	144,79	191,68	229,99	247,90
	25	2/3	7,91	274,23	120,00	165,71	214,32	254,69	274,23
	30	2/3	9,72	295,95	120,00	183,93	233,37	275,17	295,95
	5	2/3	0,67	79,60	120,00	46,89	59,25	74,08	79,60
	10	2/3	2,48	170,75	120,00	93,96	129,55	159,39	170,75
	15	2/3	4,29	218,26	120,00	125,54	168,76	203,27	218,26
	20	2/3	6,10	251,04	120,00	150,14	196,46	233,79	251,04
	25	2/3	7,91	276,52	120,00	170,78	218,43	257,70	276,52
	30	2/3	9,72	297,56	120,00	188,68	236,98	277,58	297,56

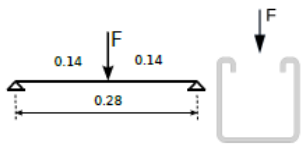
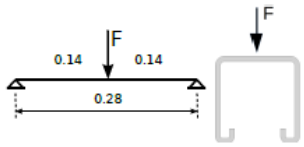
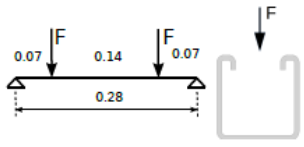
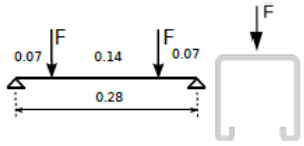
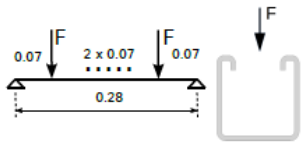
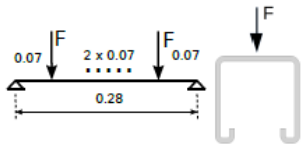
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C7

Deutsches Institut für Bautechnik DIBt

Table C8: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/41/2,5 with a support span of 0,28 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	219,75	8,65	120,00	0,83	6,13	8,60	8,65
	10	1/2	443,32	13,02	120,00	2,35	8,96	12,76	13,02
	15	1/2	666,90	19,89	120,00	4,07	12,98	19,01	19,89
	20	1/2	890,47	32,87	120,00	6,29	18,58	28,76	32,87
	25	1/2	1114,04	62,64	120,00	9,14	25,93	44,55	62,64
	30	1/2	1337,61	100,10	120,00	12,84	37,17	74,51	100,10
	5	1/2	219,75	8,60	120,00	0,82	6,11	8,56	8,60
	10	1/2	443,32	12,99	120,00	2,33	8,97	12,77	12,99
	15	1/2	666,90	20,02	120,00	4,05	13,07	19,16	20,02
	20	1/2	890,47	32,91	120,00	6,31	18,77	29,00	32,91
	25	1/2	1114,04	53,40	120,00	9,22	26,19	42,74	53,40
	30	1/2	1337,61	81,12	120,00	13,10	36,25	61,10	81,12
	5	3/4	219,75	9,34	120,00	1,19	6,64	9,26	9,34
	10	3/4	443,32	16,57	120,00	3,26	11,21	16,15	16,57
	15	3/4	666,90	28,16	120,00	5,73	17,35	25,83	28,16
	20	3/4	890,47	44,30	120,00	9,22	25,27	38,50	44,30
	25	3/4	1114,04	64,98	120,00	13,78	34,99	53,09	64,98
	30	3/4	1337,61	73,89	96,67	20,76	46,53	69,87	-
	5	3/4	219,75	9,19	120,00	1,19	6,57	9,13	9,19
	10	3/4	443,32	16,90	120,00	3,33	11,40	16,54	16,90
	15	3/4	666,90	30,99	120,00	5,96	18,31	28,02	30,99
	20	3/4	890,47	51,53	120,00	9,79	27,87	44,07	51,53
	25	3/4	1114,04	71,87	120,00	15,04	40,08	61,10	71,87
	30	3/4	1337,61	86,44	120,00	24,25	54,82	75,51	86,44
	5	2/3	109,88	8,69	120,00	0,91	6,21	8,65	8,69
	10	2/3	221,66	14,23	120,00	2,64	9,71	13,97	14,23
	15	2/3	333,45	23,75	120,00	4,59	14,72	22,14	23,75
	20	2/3	445,23	41,82	120,00	7,35	21,86	35,11	41,82
	25	2/3	557,02	73,03	120,00	11,00	31,49	52,84	73,03
	30	2/3	668,81	115,21	120,00	16,28	45,59	96,60	115,21
	5	2/3	109,88	8,80	120,00	0,98	6,29	8,76	8,80
	10	2/3	221,66	14,74	120,00	2,82	10,08	14,49	14,74
	15	2/3	333,45	24,52	120,00	4,91	15,41	23,01	24,52
	20	2/3	445,23	41,68	120,00	7,87	22,86	35,92	41,68
	25	2/3	557,02	63,48	120,00	11,75	32,56	52,25	63,48
	30	2/3	668,81	83,09	120,00	17,31	45,34	68,86	83,09

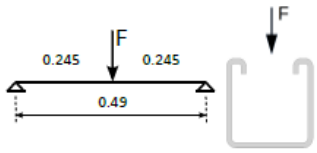
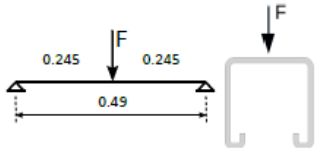
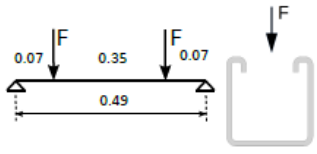
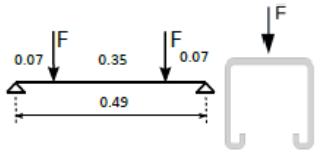
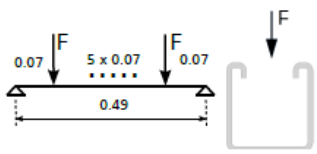
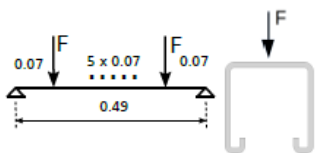
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C8

Deutsches Institut für Bautechnik DIBt

Table C9: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/41/2,5 with a support span of 0,49 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	121,07	10,34	120,00	2,23	7,63	10,19	10,34
	10	1/2	248,83	22,81	120,00	6,45	15,73	22,21	22,81
	15	1/2	376,58	42,76	120,00	11,18	27,27	40,26	42,76
	20	1/2	504,34	83,89	120,00	17,56	43,30	69,01	83,89
	25	1/2	632,09	139,15	120,00	25,87	64,96	113,83	139,15
	30	1/2	759,85	163,89	120,00	36,93	98,97	145,80	163,89
	5	1/2	121,07	10,33	120,00	2,23	7,63	10,18	10,33
	10	1/2	248,83	22,84	120,00	6,43	15,78	22,29	22,84
	15	1/2	376,58	42,66	120,00	11,19	27,36	40,21	42,66
	20	1/2	504,34	74,18	120,00	17,57	42,86	65,05	74,18
	25	1/2	632,09	109,18	120,00	25,81	61,43	92,84	109,18
	30	1/2	759,85	141,11	120,00	36,60	82,33	118,83	141,11
	5	6/7	211,88	12,68	120,00	3,66	9,43	12,43	12,68
	10	6/7	435,45	35,96	120,00	10,14	24,20	34,77	35,96
	15	6/7	659,02	90,15	120,00	18,00	44,26	74,37	90,15
	20	6/7	882,59	127,67	120,00	29,58	79,78	113,36	127,67
	25	6/7	1106,16	147,45	120,00	57,54	109,15	135,43	147,45
	30	6/7	1329,74	154,25	108,33	89,91	126,69	148,45	-
	5	6/7	211,88	12,52	120,00	3,66	9,36	12,29	12,52
	10	6/7	435,45	36,82	120,00	10,27	24,75	35,74	36,82
	15	6/7	659,02	68,76	120,00	18,50	44,52	63,53	68,76
	20	6/7	882,59	97,05	120,00	30,26	65,30	88,41	97,05
	25	6/7	1106,16	115,43	120,00	44,25	83,48	106,36	115,43
	30	6/7	1329,74	128,10	120,00	60,34	97,80	119,74	128,10
	5	2/3	35,31	11,29	120,00	2,90	8,41	11,10	11,29
	10	2/3	72,58	29,64	120,00	8,28	19,93	28,71	29,64
	15	2/3	109,84	58,22	120,00	14,50	35,54	52,93	58,22
	20	2/3	147,10	92,94	120,00	23,44	55,25	81,24	92,94
	25	2/3	184,36	121,67	120,00	34,90	75,98	106,68	121,67
	30	2/3	221,62	144,09	120,00	50,28	95,43	126,95	144,09
	5	2/3	35,31	11,42	120,00	2,99	8,52	11,23	11,42
	10	2/3	72,58	30,13	120,00	8,49	20,44	29,33	30,13
	15	2/3	109,84	58,28	120,00	14,91	36,49	53,68	58,28
	20	2/3	147,10	91,26	120,00	24,12	56,25	81,10	91,26
	25	2/3	184,36	117,15	120,00	35,78	76,42	104,79	117,15
	30	2/3	221,62	137,16	120,00	51,19	94,64	123,43	137,16

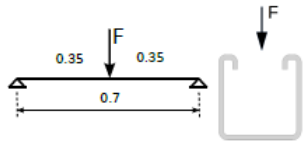
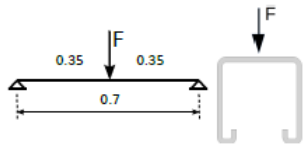
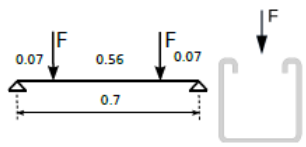
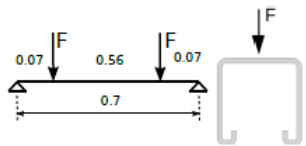
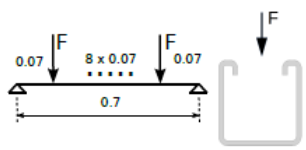
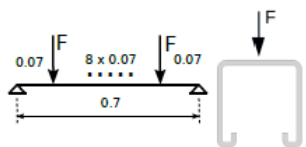
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C9

Deutsches Institut für Bautechnik DIBt

Table C10: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/41/2,5 with a support span of 0,7 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	79,88	13,10	120,00	4,48	10,04	12,78	13,10
	10	1/2	169,31	38,34	120,00	12,90	26,42	37,16	38,34
	15	1/2	258,74	78,00	120,00	22,47	49,75	72,80	78,00
	20	1/2	348,17	137,78	120,00	35,27	79,22	118,39	137,78
	25	1/2	437,60	198,60	120,00	51,57	112,70	169,93	198,60
	30	1/2	527,03	234,37	120,00	72,64	153,31	209,98	234,37
	5	1/2	79,88	13,11	120,00	4,50	10,07	12,80	13,11
	10	1/2	169,31	38,20	120,00	12,89	26,45	37,11	38,20
	15	1/2	258,74	75,67	120,00	22,35	49,19	71,18	75,67
	20	1/2	348,17	125,50	120,00	34,95	77,44	112,00	125,50
	25	1/2	437,60	169,77	120,00	50,77	107,42	150,24	169,77
	30	1/2	527,03	206,04	120,00	70,23	136,17	182,28	206,04
	5	9/10	199,71	17,53	120,00	7,33	13,54	17,01	17,53
	10	9/10	423,28	79,08	120,00	20,61	44,33	71,17	79,08
	15	9/10	646,85	138,43	120,00	37,50	96,21	127,52	138,43
	20	9/10	870,42	167,41	120,00	78,19	129,33	156,69	167,41
	25	9/10	1093,99	184,81	120,00	109,36	151,00	175,08	184,81
	30	9/10	1317,57	193,12	111,67	129,87	166,00	187,12	-
	5	9/10	199,71	17,32	120,00	7,32	13,46	16,83	17,32
	10	9/10	423,28	64,07	120,00	20,79	44,04	61,96	64,07
	15	9/10	646,85	106,33	120,00	36,82	76,41	100,64	106,33
	20	9/10	870,42	139,39	120,00	57,74	104,34	130,70	139,39
	25	9/10	1093,99	160,14	120,00	78,60	124,90	150,82	160,14
	30	9/10	1317,57	173,97	120,00	96,87	140,75	165,03	173,97
	5	2/3	15,98	14,97	120,00	5,79	11,57	14,56	14,97
	10	2/3	33,86	50,50	120,00	16,46	34,22	48,66	50,50
	15	2/3	51,75	94,77	120,00	28,52	62,09	87,64	94,77
	20	2/3	69,63	138,80	120,00	45,06	91,96	125,02	138,80
	25	2/3	87,52	170,29	120,00	64,34	118,41	153,93	170,29
	30	2/3	105,41	195,04	120,00	85,11	140,72	177,26	195,04
	5	2/3	15,98	15,19	120,00	5,95	11,77	14,79	15,19
	10	2/3	33,86	51,42	120,00	16,85	35,17	49,84	51,42
	15	2/3	51,75	95,18	120,00	29,28	63,86	89,10	95,18
	20	2/3	69,63	137,62	120,00	46,34	93,83	125,56	137,62
	25	2/3	87,52	167,23	120,00	65,99	119,67	152,89	167,23
	30	2/3	105,41	189,40	120,00	86,72	140,95	174,54	189,40

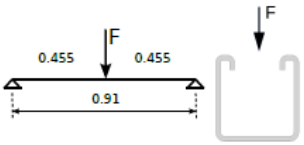
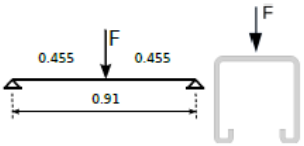
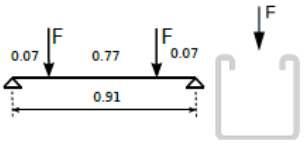
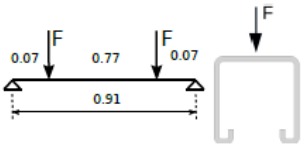
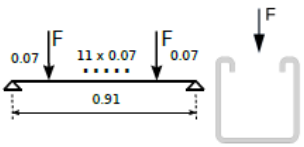
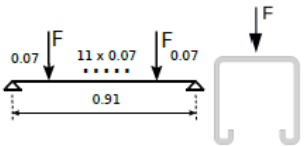
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C10

Deutsches Institut für Bautechnik DIBt

Table C11: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/41/2,5 with a support span of 0,91 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	56,38	16,96	120,00	7,63	13,43	16,40	16,96
	10	1/2	125,17	59,15	120,00	21,74	40,98	57,24	59,15
	15	1/2	193,96	118,49	120,00	37,58	78,03	111,14	118,49
	20	1/2	262,76	200,04	120,00	58,21	121,05	173,90	200,04
	25	1/2	331,55	270,28	120,00	83,37	167,83	239,03	270,28
	30	1/2	400,34	309,43	120,00	114,38	220,82	283,43	309,43
	5	1/2	56,38	16,94	120,00	7,63	13,43	16,39	16,94
	10	1/2	125,17	58,84	120,00	21,70	40,91	57,01	58,84
	15	1/2	193,96	116,10	120,00	37,41	77,53	109,60	116,10
	20	1/2	262,76	181,82	120,00	57,95	119,33	164,93	181,82
	25	1/2	331,55	233,38	120,00	82,67	159,24	211,32	233,38
	30	1/2	400,34	274,51	120,00	110,73	194,39	248,93	274,51
	5	12/13	183,24	23,58	120,00	12,02	18,72	22,70	23,58
	10	12/13	406,81	122,02	120,00	34,73	79,29	114,45	122,02
	15	12/13	630,39	177,12	120,00	74,09	135,10	166,41	177,12
	20	12/13	853,96	207,02	120,00	117,34	167,31	196,25	207,02
	25	12/13	1077,53	224,03	120,00	144,00	188,49	214,14	224,03
	30	12/13	1301,10	233,29	116,67	163,35	202,93	225,70	-
	5	12/13	183,24	23,20	120,00	11,98	18,57	22,38	23,20
	10	12/13	406,81	95,32	120,00	34,51	67,51	91,93	95,32
	15	12/13	630,39	145,27	120,00	59,46	110,07	138,87	145,27
	20	12/13	853,96	182,07	120,00	88,85	143,62	172,85	182,07
	25	12/13	1077,53	205,69	120,00	114,45	167,31	195,77	205,69
	30	12/13	1301,10	221,36	120,00	135,77	184,85	211,93	221,36
	5	2/3	8,73	20,37	120,00	9,92	16,15	19,65	20,37
	10	2/3	19,37	77,99	120,00	27,84	53,65	74,84	77,99
	15	2/3	30,02	135,09	120,00	47,56	94,15	126,39	135,09
	20	2/3	40,66	185,38	120,00	72,76	131,95	170,13	185,38
	25	2/3	51,31	220,98	120,00	99,02	162,23	202,48	220,98
	30	2/3	61,96	247,74	120,00	123,79	187,21	227,80	247,74
	5	2/3	8,73	20,81	120,00	10,20	16,52	20,10	20,81
	10	2/3	19,37	79,76	120,00	28,56	55,46	77,06	79,76
	15	2/3	30,02	136,53	120,00	49,01	97,20	128,93	136,53
	20	2/3	40,66	184,97	120,00	75,07	134,92	171,47	184,97
	25	2/3	51,31	218,74	120,00	101,82	164,32	202,33	218,74
	30	2/3	61,96	243,81	120,00	126,43	188,27	226,14	243,81

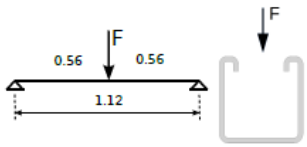
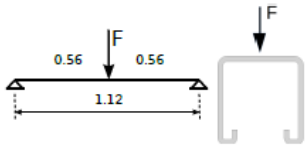
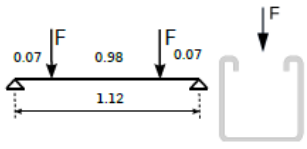
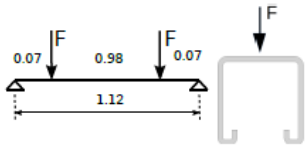
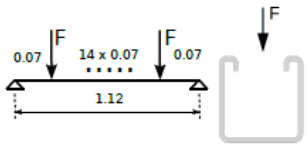
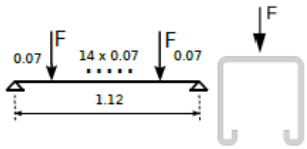
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C11

Deutsches Institut für Bautechnik DIBt

Table C12: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/41/2,5 with a support span of 1,12 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	40,62	21,87	120,00	11,66	17,75	21,02	21,87
	10	1/2	96,51	84,69	120,00	32,91	59,12	81,84	84,69
	15	1/2	152,41	165,62	120,00	56,33	111,63	155,52	165,62
	20	1/2	208,30	272,44	120,00	86,06	169,53	240,97	272,44
	25	1/2	264,19	339,36	120,00	121,39	236,43	311,07	339,36
	30	1/2	320,08	379,22	120,00	168,76	293,55	353,67	379,22
	5	1/2	40,62	21,86	120,00	11,66	17,75	21,02	21,86
	10	1/2	96,51	84,47	120,00	32,90	59,13	81,73	84,47
	15	1/2	152,41	161,83	120,00	56,27	111,37	153,46	161,83
	20	1/2	208,30	240,97	120,00	85,98	166,21	221,48	240,97
	25	1/2	264,19	299,67	120,00	120,08	214,62	274,82	299,67
	30	1/2	320,08	344,87	120,00	155,98	255,57	317,42	344,87
	5	15/16	162,48	30,66	120,00	17,57	24,78	29,32	30,66
	10	15/16	386,05	154,88	120,00	55,32	114,34	147,09	154,88
	15	15/16	609,63	215,78	120,00	112,08	169,28	203,80	215,78
	20	15/16	833,20	247,46	120,00	148,59	203,73	235,47	247,46
	25	15/16	1056,77	264,89	120,00	176,35	225,70	253,87	264,89
	30	15/16	1280,34	274,71	120,00	196,77	240,34	265,26	274,71
	5	15/16	162,48	29,80	120,00	17,40	24,40	28,60	29,80
	10	15/16	386,05	128,50	120,00	50,93	93,48	123,65	128,50
	15	15/16	609,63	187,31	120,00	85,05	144,90	179,29	187,31
	20	15/16	833,20	226,12	120,00	121,75	183,34	215,87	226,12
	25	15/16	1056,77	253,02	120,00	151,44	210,24	241,87	253,02
	30	15/16	1280,34	270,70	120,00	175,27	230,17	260,15	270,70
	5	2/3	5,08	26,96	120,00	15,00	21,75	25,86	26,96
	10	2/3	12,06	107,91	120,00	41,61	75,80	103,26	107,91
	15	2/3	19,05	174,38	120,00	69,52	126,79	164,35	174,38
	20	2/3	26,04	228,97	120,00	102,43	170,39	212,50	228,97
	25	2/3	33,02	268,69	120,00	133,74	204,04	248,55	268,69
	30	2/3	40,01	298,77	120,00	161,79	231,19	276,58	298,77
	5	2/3	5,08	27,73	120,00	15,48	22,39	26,64	27,73
	10	2/3	12,06	110,74	120,00	42,80	78,68	106,66	110,74
	15	2/3	19,05	176,46	120,00	71,79	130,90	167,59	176,46
	20	2/3	26,04	229,13	120,00	105,77	174,14	214,37	229,13
	25	2/3	33,02	267,07	120,00	137,43	206,82	249,02	267,07
	30	2/3	40,01	295,62	120,00	165,17	232,93	275,77	295,62

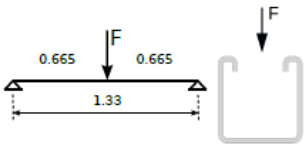
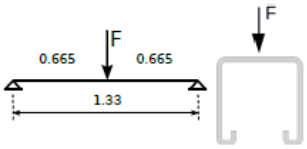
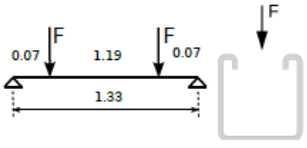
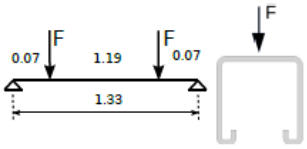
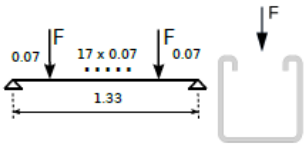
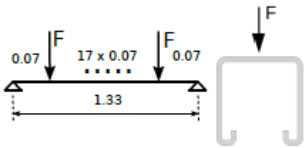
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C12

Deutsches Institut für Bautechnik DIBt

Table C13: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/41/2,5 with a support span of 1,33 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	28,93	27,90	120,00	16,62	23,06	26,68	27,90
	10	1/2	76,00	114,69	120,00	46,46	80,78	110,73	114,69
	15	1/2	123,07	217,72	120,00	78,63	149,68	204,55	217,72
	20	1/2	170,13	341,04	120,00	118,34	223,51	308,58	341,04
	25	1/2	217,20	409,98	120,00	165,12	304,83	380,63	409,98
	30	1/2	264,27	454,21	120,00	232,86	361,98	426,73	454,21
	5	1/2	28,93	27,93	120,00	16,65	23,09	26,71	27,93
	10	1/2	76,00	114,77	120,00	46,53	81,02	110,94	114,77
	15	1/2	123,07	211,37	120,00	78,76	149,66	201,27	211,37
	20	1/2	170,13	301,91	120,00	118,40	216,53	280,35	301,91
	25	1/2	217,20	367,79	120,00	161,73	272,37	340,17	367,79
	30	1/2	264,27	416,85	120,00	204,74	318,73	387,37	416,85
	5	18/19	137,43	38,76	120,00	23,87	31,66	36,86	38,76
	10	18/19	361,00	186,18	120,00	83,61	142,30	177,13	186,18
	15	18/19	584,57	254,78	120,00	139,03	201,25	240,66	254,78
	20	18/19	808,14	288,71	120,00	177,27	239,20	274,83	288,71
	25	18/19	1031,71	305,90	120,00	207,54	262,32	293,44	305,90
	30	18/19	1255,28	315,11	120,00	229,35	277,08	304,40	315,11
	5	18/19	137,43	36,84	120,00	23,32	30,68	35,21	36,84
	10	18/19	361,00	162,77	120,00	69,52	120,87	156,34	162,77
	15	18/19	584,57	231,41	120,00	112,78	181,18	221,29	231,41
	20	18/19	808,14	272,91	120,00	155,73	223,73	261,08	272,91
	25	18/19	1031,71	301,88	120,00	189,39	254,14	289,35	301,88
	30	18/19	1255,28	321,99	120,00	215,70	276,48	309,92	321,99
	5	2/3	3,05	35,23	120,00	21,29	28,73	33,66	35,23
	10	2/3	8,02	140,63	120,00	58,15	100,93	134,14	140,63
	15	2/3	12,99	215,27	120,00	94,61	160,64	203,36	215,27
	20	2/3	17,96	272,17	120,00	134,08	208,52	254,29	272,17
	25	2/3	22,93	315,46	120,00	169,40	245,39	293,63	315,46
	30	2/3	27,90	348,84	120,00	199,99	274,84	324,59	348,84
	5	2/3	3,05	36,58	120,00	22,08	29,80	35,01	36,58
	10	2/3	8,02	144,68	120,00	60,04	105,15	138,89	144,68
	15	2/3	12,99	218,14	120,00	97,94	165,70	207,37	218,14
	20	2/3	17,96	272,96	120,00	138,52	212,95	256,80	272,96
	25	2/3	22,93	314,36	120,00	173,99	248,82	294,55	314,36
	30	2/3	27,90	346,25	120,00	204,16	277,27	324,33	346,25

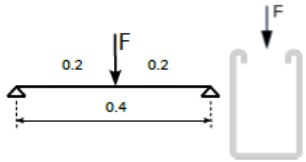
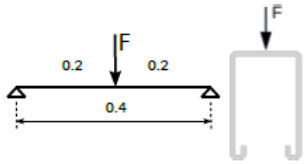
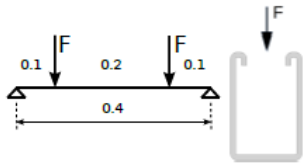
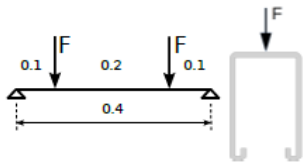
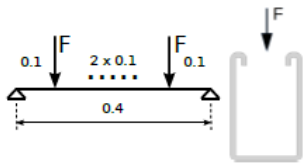
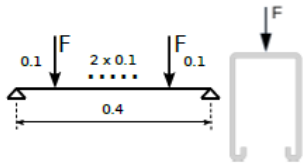
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C13

Deutsches Institut für Bautechnik DIBt

Table C14: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/62/3,0 with a support span of 0,40 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	314,09	20,53	120,00	3,59	13,00	16,62	20,53
	10	1/2	636,09	24,47	120,00	5,30	16,10	20,28	24,47
	15	1/2	958,09	29,94	120,00	7,16	19,83	25,05	29,94
	20	1/2	1280,09	29,30	71,67	9,28	25,11	-	-
	25	1/2	1602,09	20,98	40,00	11,85	-	-	-
	30	1/2	1924,09	5,48	21,67	-	-	-	-
	5	1/2	314,09	20,65	120,00	3,64	13,09	16,73	20,65
	10	1/2	636,09	24,78	120,00	5,44	16,33	20,56	24,78
	15	1/2	958,09	30,13	120,00	7,38	20,14	25,35	30,13
	20	1/2	1280,09	39,17	120,00	9,56	24,65	32,15	39,17
	25	1/2	1602,09	53,32	120,00	12,07	30,28	41,77	53,32
	30	1/2	1924,09	78,30	120,00	15,14	38,01	56,68	78,30
	5	3/4	314,09	21,51	120,00	4,07	13,86	17,55	21,51
	10	3/4	636,09	28,03	120,00	6,68	18,75	23,54	28,03
	15	3/4	958,09	37,22	120,00	9,35	24,30	31,17	37,22
	20	3/4	1280,09	52,53	120,00	12,64	31,14	42,16	52,53
	25	3/4	1602,09	73,24	120,00	16,70	40,67	57,69	73,24
	30	3/4	1924,09	92,76	120,00	22,30	52,52	75,52	92,76
	5	3/4	314,09	21,56	120,00	4,08	13,90	17,60	21,56
	10	3/4	636,09	28,08	120,00	6,71	18,80	23,60	28,08
	15	3/4	958,09	37,79	120,00	9,39	24,42	31,49	37,79
	20	3/4	1280,09	55,81	120,00	12,68	31,55	43,71	55,81
	25	3/4	1602,09	85,78	120,00	16,84	42,67	64,40	85,78
	30	3/4	1924,09	114,69	120,00	22,87	57,82	88,33	114,69
	5	2/3	157,05	20,92	120,00	3,80	13,35	16,99	20,92
	10	2/3	318,05	26,10	120,00	5,95	17,32	21,78	26,10
	15	2/3	479,05	32,99	120,00	8,17	21,87	27,73	32,99
	20	2/3	640,05	47,22	120,00	10,81	27,52	37,25	47,22
	25	2/3	801,05	44,63	76,67	13,93	35,66	-	-
	30	2/3	962,05	38,65	50,00	18,03	-	-	-
	5	2/3	157,05	21,01	120,00	3,85	13,42	17,08	21,01
	10	2/3	318,05	26,34	120,00	6,08	17,53	22,01	26,34
	15	2/3	479,05	33,24	120,00	8,36	22,18	28,04	33,24
	20	2/3	640,05	46,44	120,00	11,07	27,87	37,31	46,44
	25	2/3	801,05	67,29	120,00	14,25	35,63	51,31	67,29
	30	2/3	962,05	98,42	120,00	18,36	46,40	71,83	98,42

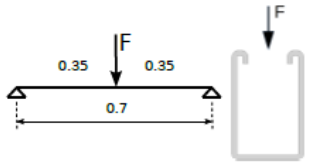
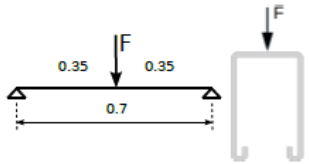
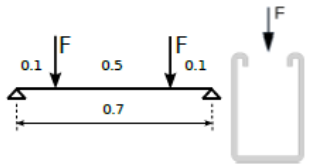
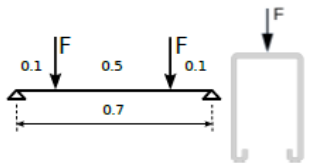
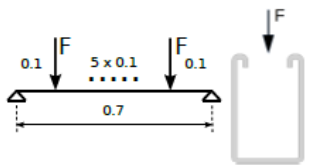
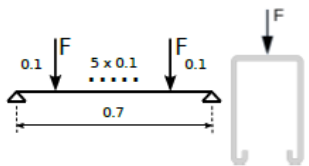
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C14

Deutsches Institut für Bautechnik DIBt

Table C15: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/62/3,0 with a support span of 0,7 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	170,16	22,85	120,00	5,19	15,00	18,79	22,85
	10	1/2	354,16	36,33	120,00	10,34	24,70	30,65	36,33
	15	1/2	538,16	185,45	120,00	17,05	87,80	135,73	185,45
	20	1/2	722,16	271,91	120,00	62,08	151,28	232,65	271,91
	25	1/2	906,16	300,19	120,00	113,48	221,62	276,19	300,19
	30	1/2	1090,16	12,95	21,67	-	-	-	-
	5	1/2	170,16	22,89	120,00	5,20	15,05	18,83	22,89
	10	1/2	354,16	34,80	120,00	10,33	24,42	29,92	34,80
	15	1/2	538,16	50,14	120,00	15,78	35,22	43,62	50,14
	20	1/2	722,16	76,73	120,00	21,96	48,00	63,28	76,73
	25	1/2	906,16	115,06	120,00	29,14	64,35	90,75	115,06
	30	1/2	1090,16	166,49	120,00	38,06	85,86	127,54	166,49
	5	6/7	297,79	26,27	120,00	6,84	18,01	22,05	26,27
	10	6/7	619,79	45,34	120,00	15,08	32,75	39,76	45,34
	15	6/7	941,79	69,44	120,00	22,83	47,23	59,45	69,44
	20	6/7	1263,79	96,39	120,00	32,07	65,68	83,63	96,39
	25	6/7	1585,79	116,07	120,00	45,02	83,71	102,46	116,07
	30	6/7	1907,79	133,10	120,00	61,21	98,15	117,90	133,10
	5	6/7	297,79	26,24	120,00	6,81	18,00	22,03	26,24
	10	6/7	619,79	46,94	120,00	15,13	33,55	41,12	46,94
	15	6/7	941,79	76,17	120,00	23,38	50,85	65,22	76,17
	20	6/7	1263,79	118,66	120,00	33,82	71,62	97,41	118,66
	25	6/7	1585,79	153,73	120,00	46,83	98,85	132,19	153,73
	30	6/7	1907,79	181,97	120,00	64,24	124,60	160,72	181,97
	5	2/3	49,63	24,51	120,00	6,02	16,47	20,37	24,51
	10	2/3	103,30	41,19	120,00	12,82	29,11	35,76	41,19
	15	2/3	156,96	64,74	120,00	19,68	43,44	55,31	64,74
	20	2/3	210,63	110,45	120,00	28,14	61,41	85,78	110,45
	25	2/3	264,30	153,37	85,00	38,54	88,06	-	-
	30	2/3	317,96	156,63	58,33	52,92	-	-	-
	5	2/3	49,63	24,60	120,00	6,07	16,55	20,46	24,60
	10	2/3	103,30	41,21	120,00	12,93	29,26	35,84	41,21
	15	2/3	156,96	63,63	120,00	19,80	43,47	54,86	63,63
	20	2/3	210,63	102,27	120,00	28,20	60,78	82,73	102,27
	25	2/3	264,30	146,65	120,00	38,38	84,40	119,38	146,65
	30	2/3	317,96	187,10	120,00	51,89	111,50	155,43	187,10

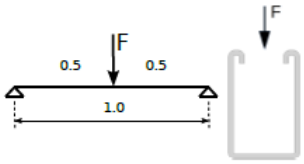
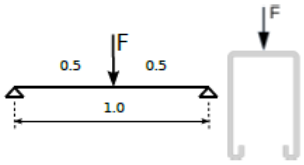
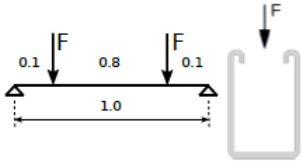
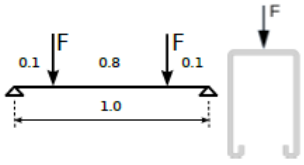
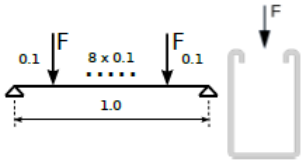
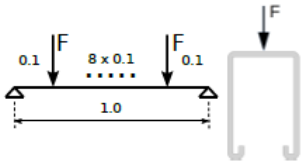
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C15

Deutsches Institut für Bautechnik DIBt

Table C16: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/62/3,0 with a support span of 1,0 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	109,03	26,72	120,00	7,81	18,32	22,38	26,72
	10	1/2	237,83	88,11	120,00	19,94	51,22	70,63	88,11
	15	1/2	366,63	261,53	120,00	43,82	122,79	207,13	261,53
	20	1/2	495,43	366,81	120,00	88,18	235,46	311,38	366,81
	25	1/2	624,23	414,95	120,00	177,47	303,04	375,39	414,95
	30	1/2	753,03	57,80	21,67	-	-	-	-
	5	1/2	109,03	26,59	120,00	7,75	18,25	22,29	26,59
	10	1/2	237,83	50,70	120,00	18,09	37,24	44,78	50,70
	15	1/2	366,63	81,34	120,00	28,99	58,83	72,13	81,34
	20	1/2	495,43	131,49	120,00	41,35	83,82	109,92	131,49
	25	1/2	624,23	193,49	120,00	55,62	114,63	158,01	193,49
	30	1/2	753,03	261,81	120,00	73,13	151,88	213,09	261,81
	5	9/10	272,58	32,88	120,00	10,90	23,78	28,29	32,88
	10	9/10	594,58	71,42	120,00	26,94	52,44	63,45	71,42
	15	9/10	916,58	106,39	120,00	42,70	79,60	95,33	106,39
	20	9/10	1238,58	131,76	120,00	63,84	101,70	119,09	131,76
	25	9/10	1560,58	152,52	120,00	82,59	119,26	138,28	152,52
	30	9/10	1882,58	170,88	120,00	97,40	133,58	154,59	170,88
	5	9/10	272,58	33,01	120,00	10,84	23,91	28,43	33,01
	10	9/10	594,58	74,73	120,00	27,89	55,52	67,02	74,73
	15	9/10	916,58	124,52	120,00	44,44	88,48	110,23	124,52
	20	9/10	1238,58	182,95	120,00	64,94	123,53	158,83	182,95
	25	9/10	1560,58	223,02	120,00	88,49	159,55	197,32	223,02
	30	9/10	1882,58	250,84	120,00	115,31	190,76	228,02	250,84
	5	2/3	21,81	29,61	120,00	9,26	20,89	25,17	29,61
	10	2/3	47,57	62,72	120,00	22,85	46,09	55,76	62,72
	15	2/3	73,33	106,21	120,00	36,41	73,76	92,62	106,21
	20	2/3	99,09	187,11	120,00	52,87	106,45	145,00	187,11
	25	2/3	124,85	350,68	120,00	72,48	151,53	248,48	350,68
	30	2/3	150,61	391,88	120,00	97,99	221,06	347,87	391,88
	5	2/3	21,81	29,75	120,00	9,34	21,04	25,32	29,75
	10	2/3	47,57	62,65	120,00	23,01	46,32	55,83	62,65
	15	2/3	73,33	103,86	120,00	36,55	73,69	91,57	103,86
	20	2/3	99,09	165,05	120,00	52,88	105,03	138,63	165,05
	25	2/3	124,85	218,79	120,00	71,96	142,06	187,51	218,79
	30	2/3	150,61	264,69	120,00	95,51	179,37	231,36	264,69

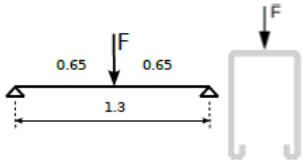
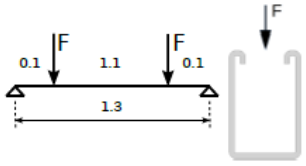
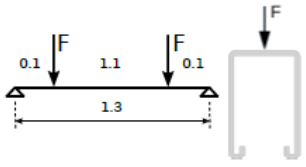
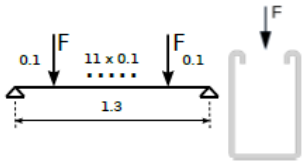
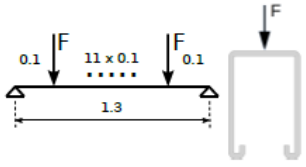
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C16

Deutsches Institut für Bautechnik DIBt

Table C17: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/62/3,0 with a support span of 1,3 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	73,38	32,67	120,00	11,67	23,33	27,87	32,67
	10	1/2	172,46	117,88	120,00	35,32	74,83	98,44	117,88
	15	1/2	271,53	364,94	120,00	66,74	179,72	316,26	364,94
	20	1/2	370,61	451,33	120,00	124,76	343,34	411,25	451,33
	25	1/2	469,69	503,19	120,00	290,57	406,55	464,75	503,19
	30	1/2	568,76	79,20	21,67	-	-	-	-
	5	1/2	73,38	31,90	120,00	11,38	22,87	27,28	31,90
	10	1/2	172,46	72,76	120,00	28,88	55,06	65,41	72,76
	15	1/2	271,53	123,05	120,00	47,10	90,80	110,46	123,05
	20	1/2	370,61	199,16	120,00	67,64	130,96	169,39	199,16
	25	1/2	469,69	281,45	120,00	91,07	177,67	236,89	281,45
	30	1/2	568,76	364,69	120,00	119,12	229,83	307,16	364,69
	5	12/13	238,48	41,41	120,00	16,06	31,02	36,22	41,41
	10	12/13	560,48	101,51	120,00	44,76	80,22	92,87	101,51
	15	12/13	882,48	138,38	120,00	73,21	110,72	126,82	138,38
	20	12/13	1204,48	165,37	120,00	95,12	133,35	151,89	165,37
	25	12/13	1526,48	188,18	120,00	112,70	151,67	172,66	188,18
	30	12/13	1848,48	208,55	120,00	128,04	167,55	190,69	208,55
	5	12/13	238,48	41,30	120,00	15,97	31,16	36,26	41,30
	10	12/13	560,48	109,73	120,00	44,64	83,63	99,79	109,73
	15	12/13	882,48	177,84	120,00	71,74	133,82	161,49	177,84
	20	12/13	1204,48	248,18	120,00	104,01	181,84	223,03	248,18
	25	12/13	1526,48	295,05	120,00	137,51	222,99	267,13	295,05
	30	12/13	1848,48	326,41	120,00	171,73	258,03	299,67	326,41
	5	2/3	11,36	37,07	120,00	13,89	27,38	32,19	37,07
	10	2/3	26,69	92,65	120,00	36,90	69,75	83,57	92,65
	15	2/3	42,02	160,09	120,00	59,61	114,40	141,66	160,09
	20	2/3	57,36	266,65	120,00	86,65	164,00	219,76	266,65
	25	2/3	72,69	368,19	120,00	117,61	226,10	302,44	368,19
	30	2/3	88,02	455,73	120,00	156,88	284,25	380,42	455,73
	5	2/3	11,36	37,40	120,00	14,06	27,70	32,53	37,40
	10	2/3	26,69	92,70	120,00	37,23	70,29	83,87	92,70
	15	2/3	42,02	156,51	120,00	59,95	114,49	140,16	156,51
	20	2/3	57,36	236,59	120,00	86,78	161,16	205,38	236,59
	25	2/3	72,69	298,83	120,00	116,70	208,77	261,97	298,83
	30	2/3	88,02	346,29	120,00	150,65	253,15	310,49	346,29

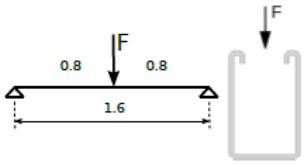
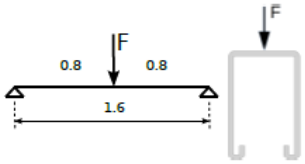
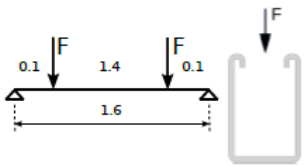
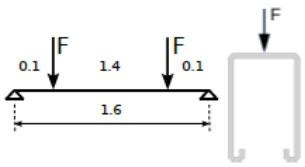
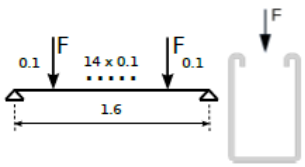
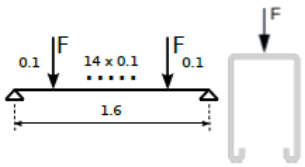
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C17

Deutsches Institut für Bautechnik DIBt

Table C18: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/62/3,0 with a support span of 1,6 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	48,87	42,10	120,00	17,26	31,02	36,45	42,10
	10	1/2	129,37	152,39	120,00	51,41	101,49	129,79	152,39
	15	1/2	209,87	461,86	120,00	93,44	304,03	414,13	461,86
	20	1/2	290,37	550,79	120,00	224,26	442,26	511,52	550,79
	25	1/2	370,87	605,93	120,00	390,79	507,75	568,36	605,93
	30	1/2	451,37	105,91	21,67	-	-	-	-
	5	1/2	48,87	39,14	120,00	16,27	29,17	34,08	39,14
	10	1/2	129,37	101,35	120,00	42,91	78,18	92,17	101,35
	15	1/2	209,87	174,66	120,00	70,25	131,02	158,18	174,66
	20	1/2	290,37	276,87	120,00	100,80	188,20	239,38	276,87
	25	1/2	370,87	377,76	120,00	135,04	250,72	324,44	377,76
	30	1/2	451,37	476,56	120,00	174,83	316,68	408,92	476,56
	5	15/16	195,49	52,93	120,00	22,36	40,31	46,69	52,93
	10	15/16	517,49	127,44	120,00	67,99	105,13	118,27	127,44
	15	15/16	839,49	167,30	120,00	98,68	137,37	154,74	167,30
	20	15/16	1161,49	197,71	120,00	121,24	162,05	182,65	197,71
	25	15/16	1483,49	224,07	120,00	140,05	182,51	206,38	224,07
	30	15/16	1805,49	247,47	120,00	156,74	200,57	227,00	247,47
	5	15/16	195,49	50,48	120,00	21,93	39,19	44,92	50,48
	10	15/16	517,49	150,16	120,00	64,89	116,60	137,78	150,16
	15	15/16	839,49	235,96	120,00	104,33	184,49	217,51	235,96
	20	15/16	1161,49	316,60	120,00	149,04	243,98	289,78	316,60
	25	15/16	1483,49	369,91	120,00	191,57	290,39	340,15	369,91
	30	15/16	1805,49	406,44	120,00	232,09	328,81	376,50	406,44
	5	2/3	6,11	46,26	120,00	19,64	35,37	40,84	46,26
	10	2/3	16,17	128,12	120,00	54,12	98,10	116,62	128,12
	15	2/3	26,23	218,74	120,00	87,54	160,70	195,88	218,74
	20	2/3	36,30	335,22	120,00	126,16	226,64	289,44	335,22
	25	2/3	46,36	424,65	120,00	168,77	292,46	367,55	424,65
	30	2/3	56,42	510,15	120,00	219,35	350,06	437,69	510,15
	5	2/3	6,11	46,90	120,00	19,96	35,98	41,48	46,90
	10	2/3	16,17	128,49	120,00	54,72	99,15	117,36	128,49
	15	2/3	26,23	212,85	120,00	88,18	160,91	193,39	212,85
	20	2/3	36,30	306,37	120,00	126,42	220,97	272,53	306,37
	25	2/3	46,36	376,30	120,00	166,49	274,98	335,04	376,30
	30	2/3	56,42	427,49	120,00	208,52	324,00	386,40	427,49

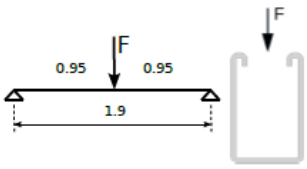
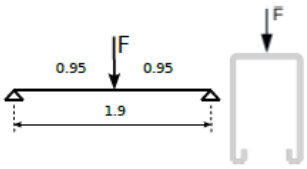
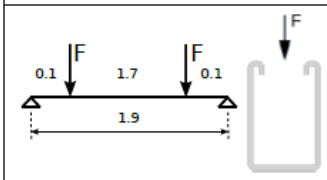
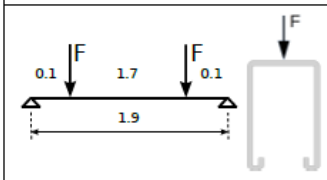
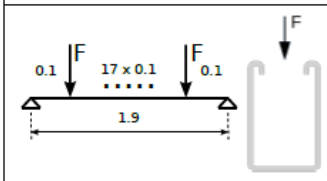
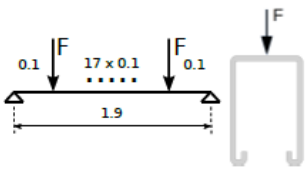
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C18

Deutsches Institut für Bautechnik DIBt

Table C19: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/62/3,0 with a support span of 1,9 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	30,23	54,92	120,00	24,70	41,76	48,33	54,92
	10	1/2	98,02	198,93	120,00	70,70	133,99	169,24	198,93
	15	1/2	165,81	547,56	120,00	126,15	397,52	497,06	547,56
	20	1/2	233,60	652,68	120,00	352,78	533,11	609,91	652,68
	25	1/2	301,39	716,16	120,00	478,58	608,91	676,55	716,16
	30	1/2	369,18	146,41	21,67	-	-	-	-
	5	1/2	30,23	48,76	120,00	22,64	37,56	43,13	48,76
	10	1/2	98,02	136,95	120,00	60,49	107,05	125,51	136,95
	15	1/2	165,81	235,49	120,00	98,63	179,30	214,80	235,49
	20	1/2	233,60	362,87	120,00	140,75	254,36	318,12	362,87
	25	1/2	301,39	481,34	120,00	187,05	332,11	419,56	481,34
	30	1/2	369,18	595,08	120,00	239,27	411,05	517,73	595,08
	5	18/19	143,60	68,27	120,00	30,04	52,45	60,60	68,27
	10	18/19	465,60	150,63	120,00	88,99	127,12	140,90	150,63
	15	18/19	787,60	195,01	120,00	121,07	162,20	181,21	195,01
	20	18/19	1109,60	230,23	120,00	145,34	189,96	213,26	230,23
	25	18/19	1431,60	261,20	120,00	166,06	213,33	240,92	261,20
	30	18/19	1753,60	288,38	120,00	184,58	233,98	264,69	288,38
	5	18/19	143,60	60,09	120,00	28,43	47,58	53,96	60,09
	10	18/19	465,60	194,53	120,00	88,04	153,19	179,57	194,53
	15	18/19	787,60	298,87	120,00	141,28	239,04	277,76	298,87
	20	18/19	1109,60	388,92	120,00	198,36	309,03	359,59	388,92
	25	18/19	1431,60	450,33	120,00	249,47	361,66	417,10	450,33
	30	18/19	1753,60	493,36	120,00	295,81	403,76	458,95	493,36
	5	2/3	3,19	57,87	120,00	26,81	45,46	51,78	57,87
	10	2/3	10,35	170,41	120,00	75,21	132,06	156,03	170,41
	15	2/3	17,50	283,96	120,00	121,00	213,40	256,80	283,96
	20	2/3	24,66	403,07	120,00	172,26	291,74	357,66	403,07
	25	2/3	31,81	491,27	120,00	226,66	358,54	435,82	491,27
	30	2/3	38,97	562,64	120,00	281,00	417,55	502,40	562,64
	5	2/3	3,19	59,09	120,00	27,39	46,60	52,99	59,09
	10	2/3	10,35	171,34	120,00	76,28	133,96	157,49	171,34
	15	2/3	17,50	274,76	120,00	122,16	213,29	252,26	274,76
	20	2/3	24,66	377,97	120,00	172,45	284,66	341,89	377,97
	25	2/3	31,81	453,87	120,00	221,85	343,83	410,40	453,87
	30	2/3	38,97	510,09	120,00	270,53	395,62	463,80	510,09

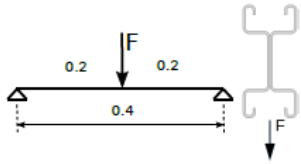
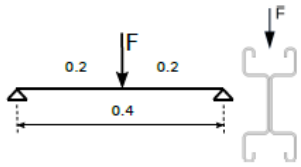
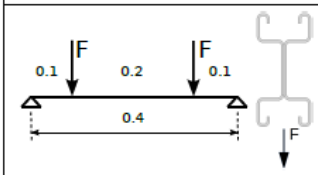
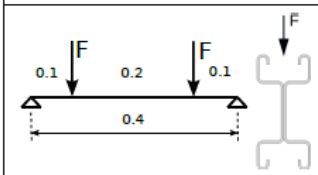
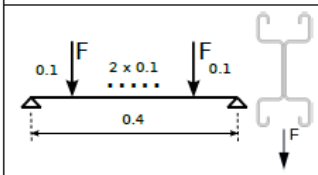
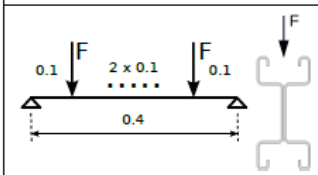
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C19

Deutsches Institut für Bautechnik DIBt

Table C20: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/86/2,0 D with a support span of 0,4 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	399,05	39,17	120,00	14,17	27,31	38,73	39,17
	10	1/2	806,05	45,83	120,00	15,13	30,54	44,46	45,83
	15	1/2	1213,05	59,18	120,00	16,83	35,93	54,04	59,18
	20	1/2	1620,05	60,45	78,33	19,15	42,88	-	-
	25	1/2	2027,05	21,66	28,34	-	-	-	-
	30	1/2	2434,05	22,16	26,67	-	-	-	-
	5	1/2	399,05	38,54	120,00	14,01	26,95	38,19	38,54
	10	1/2	806,05	57,49	120,00	14,61	29,52	49,14	57,49
	15	1/2	1213,05	72,23	80,00	15,88	44,66	-	-
	20	1/2	1620,05	60,62	51,67	18,29	-	-	-
	25	1/2	2027,05	16,65	26,67	-	-	-	-
	30	1/2	2434,05	14,69	23,34	-	-	-	-
	5	3/4	399,05	39,49	120,00	14,18	27,43	39,04	39,49
	10	3/4	806,05	51,05	120,00	15,54	32,66	48,54	51,05
	15	3/4	1213,05	60,00	80,00	17,86	40,36	-	-
	20	3/4	1620,05	20,64	28,34	-	-	-	-
	25	3/4	2027,05	20,42	26,67	-	-	-	-
	30	3/4	2434,05	25,79	26,67	-	-	-	-
	5	3/4	399,05	39,46	120,00	14,15	27,38	39,01	39,46
	10	3/4	806,05	102,67	120,00	15,54	33,26	76,46	102,67
	15	3/4	1213,05	179,68	120,00	18,01	79,61	149,35	179,68
	20	3/4	1620,05	19,39	28,34	-	-	-	-
	25	3/4	2027,05	18,67	25,00	-	-	-	-
	30	3/4	2434,05	14,21	21,67	-	-	-	-
	5	2/3	199,53	39,03	120,00	14,14	27,22	38,61	39,03
	10	2/3	403,03	47,82	120,00	15,23	31,35	46,12	47,82
	15	2/3	606,53	66,00	106,67	17,16	37,84	58,95	-
	20	2/3	810,03	60,45	68,33	19,80	47,05	-	-
	25	2/3	1013,53	21,37	28,34	-	-	-	-
	30	2/3	1217,03	25,65	28,34	-	-	-	-
	5	2/3	199,53	38,76	120,00	14,06	27,06	38,38	38,76
	10	2/3	403,03	60,01	120,00	14,96	30,83	46,79	60,01
	15	2/3	606,53	91,91	80,00	16,68	45,28	-	-
	20	2/3	810,03	77,10	50,00	19,27	-	-	-
	25	2/3	1013,53	21,39	28,34	-	-	-	-
	30	2/3	1217,03	15,54	23,34	-	-	-	-

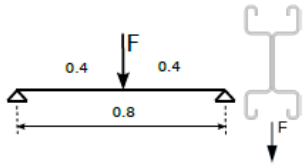
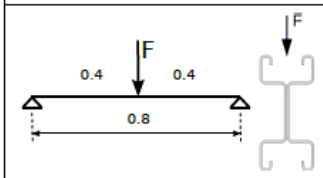
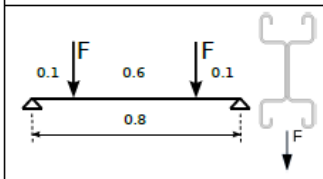
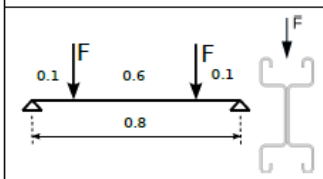
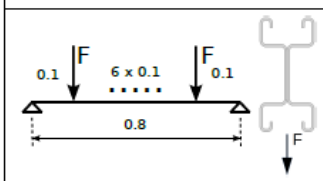
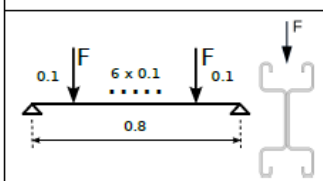
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C20

Deutsches Institut für Bautechnik DIBt

Table C21: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/86/2,0 D with a support span of 0,8 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	187,61	39,38	120,00	14,33	27,43	38,87	39,38
	10	1/2	391,11	59,87	120,00	15,76	34,26	54,22	59,87
	15	1/2	594,61	385,97	120,00	19,06	57,38	301,73	385,97
	20	1/2	798,11	425,13	120,00	24,12	278,70	367,45	425,13
	25	1/2	1001,61	26,31	28,34	-	-	-	-
	30	1/2	1205,11	22,75	25,00	-	-	-	-
	5	1/2	187,61	39,18	120,00	14,27	27,32	38,70	39,18
	10	1/2	391,11	117,86	120,00	15,59	41,51	81,33	117,86
	15	1/2	594,61	296,65	120,00	21,37	101,68	231,84	296,65
	20	1/2	798,11	351,44	120,00	45,27	215,95	318,59	351,44
	25	1/2	1001,61	378,72	120,00	213,44	309,43	361,67	378,72
	30	1/2	1205,11	17,32	21,67	-	-	-	-
	5	7/8	375,22	40,55	120,00	14,55	27,95	39,91	40,55
	10	7/8	782,22	208,01	120,00	17,92	82,90	175,38	208,01
	15	7/8	1189,22	274,33	120,00	25,37	185,63	248,66	274,33
	20	7/8	1596,22	24,36	26,67	-	-	-	-
	25	7/8	2003,22	22,52	23,34	-	-	-	-
	30	7/8	2410,22	19,72	21,67	-	-	-	-
	5	7/8	375,22	40,89	120,00	14,56	27,98	40,23	40,89
	10	7/8	782,22	276,99	120,00	22,31	131,64	241,07	276,99
	15	7/8	1189,22	331,66	120,00	28,60	231,92	304,96	331,66
	20	7/8	1596,22	18,59	23,34	-	-	-	-
	25	7/8	2003,22	17,31	21,67	-	-	-	-
	30	7/8	2410,22	15,68	20,01	-	-	-	-
	5	2/3	46,90	39,50	120,00	14,39	27,48	38,95	39,50
	10	2/3	97,78	81,83	120,00	16,42	38,10	64,36	81,83
	15	2/3	148,65	281,70	120,00	20,97	73,11	240,51	281,70
	20	2/3	199,53	327,44	120,00	28,11	225,82	299,48	327,44
	25	2/3	250,40	33,02	28,34	-	-	-	-
	30	2/3	301,28	27,62	25,00	-	-	-	-
	5	2/3	46,90	39,50	120,00	14,38	27,47	38,96	39,50
	10	2/3	97,78	108,08	120,00	16,41	39,83	84,66	108,08
	15	2/3	148,65	249,45	120,00	21,15	91,57	191,16	249,45
	20	2/3	199,53	321,72	120,00	41,47	176,09	276,47	321,72
	25	2/3	250,40	22,23	25,00	-	-	-	-
	30	2/3	301,28	16,45	21,67	-	-	-	-

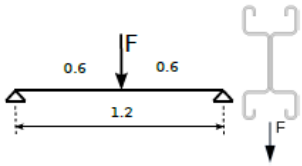
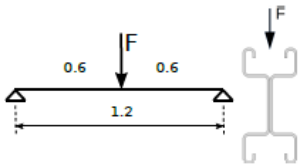
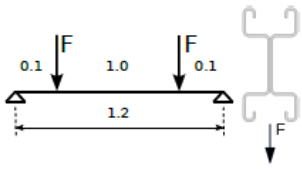
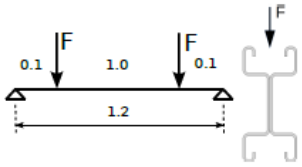
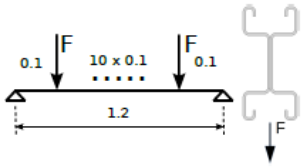
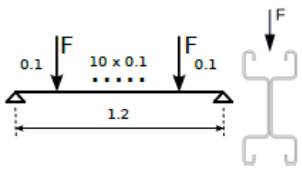
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C21

Deutsches Institut für Bautechnik DIBt

Table C22: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/86/2,0 D with a support span of 1,2 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	111,83	40,46	120,00	14,78	28,04	39,71	40,46
	10	1/2	247,50	298,87	120,00	17,44	47,76	153,05	298,87
	15	1/2	383,16	480,45	120,00	24,53	255,17	423,37	480,45
	20	1/2	518,83	540,18	120,00	50,87	404,13	503,21	540,18
	25	1/2	654,50	27,05	25,00	-	-	-	-
	30	1/2	790,16	19,52	21,67	-	-	-	-
	5	1/2	111,83	40,61	120,00	14,73	28,01	39,88	40,61
	10	1/2	247,50	273,88	120,00	17,82	65,69	195,00	273,88
	15	1/2	383,16	427,43	120,00	33,55	248,52	377,74	427,43
	20	1/2	518,83	490,27	120,00	147,38	362,48	453,88	490,27
	25	1/2	654,50	526,99	120,00	312,30	427,33	498,74	526,99
	30	1/2	790,16	31,55	21,67	-	-	-	-
	5	11/12	335,49	42,66	120,00	15,17	28,82	41,68	42,66
	10	11/12	742,49	287,90	120,00	22,64	170,35	254,49	287,90
	15	11/12	1149,49	355,06	120,00	125,88	262,28	328,21	355,06
	20	11/12	1556,49	432,20	120,00	262,72	353,41	407,57	432,20
	25	11/12	1963,49	481,52	120,00	350,21	411,67	458,31	481,52
	30	11/12	2370,49	513,80	113,33	408,77	456,39	496,62	-
	5	11/12	335,49	43,10	120,00	15,17	28,84	42,11	43,10
	10	11/12	742,49	403,17	120,00	23,61	214,76	359,51	403,17
	15	11/12	1149,49	443,47	120,00	164,54	351,36	423,62	443,47
	20	11/12	1556,49	18,97	21,67	-	-	-	-
	25	11/12	1963,49	17,58	20,01	-	-	-	-
	30	11/12	2370,49	15,78	18,34	-	-	-	-
	5	2/3	18,64	41,02	120,00	14,94	28,29	40,18	41,02
	10	2/3	41,25	172,65	120,00	19,10	54,58	111,47	172,65
	15	2/3	63,86	383,55	120,00	28,94	142,82	327,75	383,55
	20	2/3	86,47	451,73	120,00	50,71	312,09	411,30	451,73
	25	2/3	109,08	46,47	26,67	-	-	-	-
	30	2/3	131,69	38,11	23,34	-	-	-	-
	5	2/3	18,64	41,03	120,00	14,94	28,28	40,20	41,03
	10	2/3	41,25	154,15	120,00	19,13	65,70	125,85	154,15
	15	2/3	63,86	317,02	120,00	30,12	138,51	253,88	317,02
	20	2/3	86,47	416,28	120,00	75,58	239,10	361,46	416,28
	25	2/3	109,08	470,41	120,00	161,44	326,32	425,93	470,41
	30	2/3	131,69	23,75	21,67	-	-	-	-

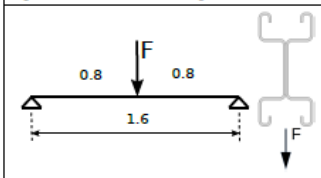
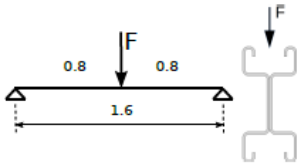
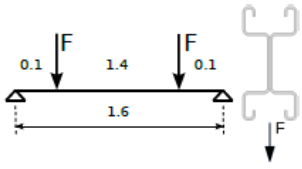
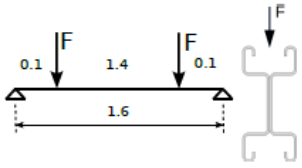
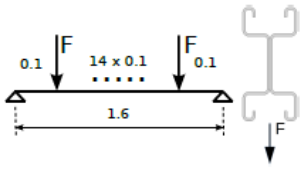
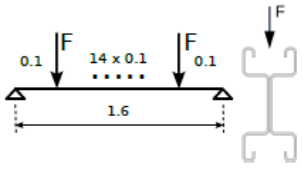
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C22

Deutsches Institut für Bautechnik DIBt

Table C23: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/86/2,0 D with a support span of 1,6 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	69,97	42,31	120,00	15,46	29,03	41,19	42,31
	10	1/2	171,72	390,11	120,00	20,40	102,58	308,66	390,11
	15	1/2	273,47	565,34	120,00	39,18	359,76	507,06	565,34
	20	1/2	375,22	681,74	120,00	218,41	501,03	631,22	681,74
	25	1/2	476,97	38,38	23,34	-	-	-	-
	30	1/2	578,72	30,07	21,67	-	-	-	-
	5	1/2	69,97	43,94	120,00	15,42	29,14	42,71	43,94
	10	1/2	171,72	415,23	120,00	22,46	125,32	341,19	415,23
	15	1/2	273,47	573,31	120,00	56,26	383,79	519,76	573,31
	20	1/2	375,22	652,04	120,00	288,93	505,27	609,92	652,04
	25	1/2	476,97	670,10	120,00	425,10	557,70	638,30	670,10
	30	1/2	578,72	25,01	20,01	-	-	-	-
	5	15/16	279,86	217,08	120,00	15,99	30,09	65,87	217,08
	10	15/16	686,86	392,11	120,00	58,10	259,45	356,50	392,11
	15	15/16	1093,86	468,99	120,00	203,65	362,52	439,43	468,99
	20	15/16	1500,86	511,85	120,00	313,83	425,16	487,22	511,85
	25	15/16	1907,86	542,03	120,00	385,27	469,61	521,06	542,03
	30	15/16	2314,86	561,43	120,00	427,33	496,71	540,72	561,43
	5	15/16	279,86	297,67	120,00	16,00	30,14	80,52	297,67
	10	15/16	686,86	526,02	120,00	113,02	375,30	482,78	526,02
	15	15/16	1093,86	593,50	120,00	377,98	505,78	572,07	593,50
	20	15/16	1500,86	17,90	20,01	-	-	-	-
	25	15/16	1907,86	17,79	18,34	-	-	-	-
	30	15/16	2314,86	18,09	16,68	-	-	-	-
	5	2/3	8,75	43,46	120,00	15,74	29,50	42,20	43,46
	10	2/3	21,46	208,50	120,00	23,17	80,98	159,95	208,50
	15	2/3	34,18	471,25	120,00	42,02	191,38	398,39	471,25
	20	2/3	46,90	565,67	120,00	85,25	383,38	512,19	565,67
	25	2/3	59,62	623,66	120,00	189,68	481,93	579,76	623,66
	30	2/3	72,34	33,21	21,67	-	-	-	-
	5	2/3	8,75	43,37	120,00	15,73	29,47	42,11	43,37
	10	2/3	21,46	202,38	120,00	23,16	95,20	168,92	202,38
	15	2/3	34,18	390,34	120,00	49,20	189,69	321,84	390,34
	20	2/3	46,90	509,01	120,00	107,69	306,45	446,10	509,01
	25	2/3	59,62	581,75	120,00	206,69	405,61	525,87	581,75
	30	2/3	72,34	632,76	120,00	340,27	480,97	583,96	632,76

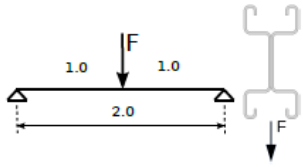
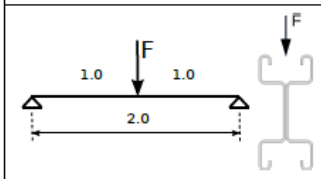
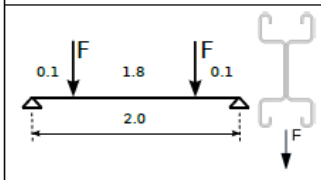
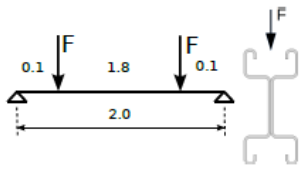
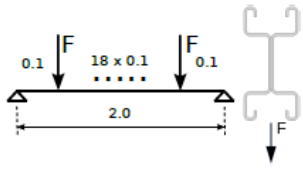
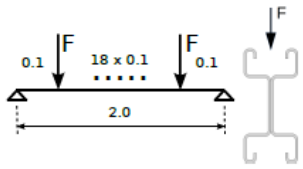
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C23

Deutsches Institut für Bautechnik DIBt

Table C24: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/86/2,0 D with a support span of 2,0 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	41,67	45,69	120,00	16,42	30,47	44,02	45,69
	10	1/2	123,07	537,39	120,00	25,71	229,67	459,91	537,39
	15	1/2	204,47	708,88	120,00	80,46	501,03	650,32	708,88
	20	1/2	285,87	799,57	120,00	374,87	633,79	753,92	799,57
	25	1/2	367,27	32,08	21,67	-	-	-	-
	30	1/2	448,67	63,10	21,67	-	-	-	-
	5	1/2	41,67	51,85	120,00	16,37	30,94	49,52	51,85
	10	1/2	123,07	554,21	120,00	29,82	259,83	479,07	554,21
	15	1/2	204,47	720,35	120,00	106,84	518,32	662,03	720,35
	20	1/2	285,87	810,10	120,00	415,60	646,98	763,38	810,10
	25	1/2	367,27	836,57	120,00	556,30	709,34	800,64	836,57
	30	1/2	448,67	37,86	20,01	-	-	-	-
	5	19/20	208,35	431,96	120,00	17,00	31,91	393,07	431,96
	10	19/20	615,35	508,75	120,00	116,24	354,80	466,81	508,75
	15	19/20	1022,35	597,20	120,00	283,50	471,16	562,33	597,20
	20	19/20	1429,35	645,66	120,00	403,28	539,65	615,17	645,66
	25	19/20	1836,35	691,76	120,00	501,66	604,27	666,12	691,76
	30	19/20	2243,35	715,05	120,00	542,09	629,67	685,67	715,05
	5	19/20	208,35	509,59	120,00	17,01	31,99	418,25	509,59
	10	19/20	615,35	660,50	120,00	186,86	481,02	607,25	660,50
	15	19/20	1022,35	751,79	120,00	466,26	630,38	719,40	751,79
	20	19/20	1429,35	221,72	21,67	-	-	-	-
	25	19/20	1836,35	236,93	20,01	-	-	-	-
	30	19/20	2243,35	25,61	15,01	-	-	-	-
	5	2/3	4,17	46,59	120,00	16,87	31,29	44,73	46,59
	10	2/3	12,31	231,18	120,00	28,58	96,72	192,25	231,18
	15	2/3	20,45	508,32	120,00	54,23	224,39	403,17	508,32
	20	2/3	28,59	654,29	120,00	99,52	391,90	580,70	654,29
	25	2/3	36,73	736,81	120,00	235,75	550,23	678,70	736,81
	30	2/3	44,87	78,36	23,34	-	-	-	-
	5	2/3	4,17	46,65	120,00	16,78	31,06	44,82	46,65
	10	2/3	12,31	256,34	120,00	28,70	125,86	216,92	256,34
	15	2/3	20,45	469,72	120,00	72,34	247,56	394,91	469,72
	20	2/3	28,59	598,50	120,00	141,78	378,24	529,29	598,50
	25	2/3	36,73	686,06	120,00	256,78	484,59	621,91	686,06
	30	2/3	44,87	749,11	120,00	396,73	568,59	690,13	749,11

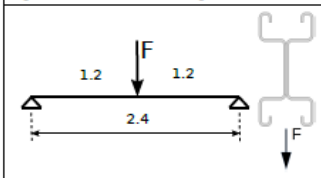
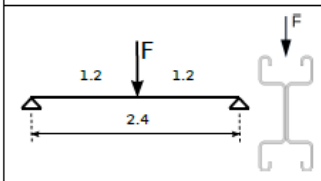
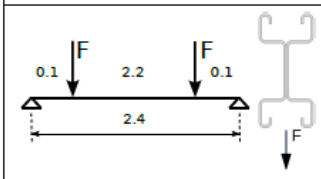
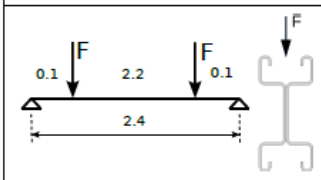
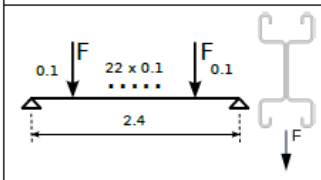
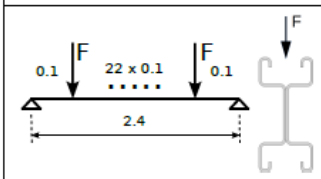
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C24

Deutsches Institut für Bautechnik DIBt

Table C25: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/86/2,0 D with a support span of 2,4 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	20,16	59,50	120,00	17,70	32,68	56,03	59,50
	10	1/2	87,99	678,24	120,00	35,41	379,42	599,47	678,24
	15	1/2	155,82	862,67	120,00	193,05	637,62	797,83	862,67
	20	1/2	223,66	959,52	120,00	506,63	780,32	909,73	959,52
	25	1/2	291,49	1026,45	120,00	693,18	880,58	985,63	1026,45
	30	1/2	359,32	1081,35	120,00	811,98	953,60	1042,94	1081,35
	5	1/2	20,16	69,92	120,00	17,65	33,94	64,70	69,92
	10	1/2	87,99	691,16	120,00	40,80	397,38	613,69	691,16
	15	1/2	155,82	872,46	120,00	226,29	651,83	807,87	872,46
	20	1/2	223,66	970,21	120,00	536,09	792,12	919,72	970,21
	25	1/2	291,49	1034,49	120,00	712,30	889,64	993,66	1034,49
	30	1/2	359,32	1077,21	120,00	821,57	957,25	1043,58	1077,21
	5	23/24	120,94	527,34	120,00	18,16	34,79	493,35	527,34
	10	23/24	527,94	632,22	120,00	174,91	454,17	583,29	632,22
	15	23/24	934,94	733,37	120,00	367,82	585,96	692,08	733,37
	20	23/24	1341,94	784,46	120,00	492,71	657,96	749,22	784,46
	25	23/24	1748,94	859,97	120,00	633,08	757,55	830,34	859,97
	30	23/24	2155,94	926,80	120,00	687,74	803,47	880,41	926,80
	5	23/24	120,94	639,08	120,00	18,17	34,91	583,98	639,08
	10	23/24	527,94	787,98	120,00	252,82	583,52	727,02	787,98
	15	23/24	934,94	901,54	120,00	543,92	744,63	857,58	901,54
	20	23/24	1341,94	946,83	120,00	729,56	855,69	925,83	946,83
	25	23/24	1748,94	26,86	15,01	-	-	-	-
	30	23/24	2155,94	17,89	10,01	-	-	-	-
	5	2/3	1,68	52,93	120,00	18,12	33,32	50,34	52,93
	10	2/3	7,33	314,63	120,00	36,34	146,93	265,88	314,63
	15	2/3	12,99	601,53	120,00	82,58	307,56	496,63	601,53
	20	2/3	18,64	757,60	120,00	164,12	482,67	676,58	757,60
	25	2/3	24,29	856,72	120,00	338,58	646,49	789,72	856,72
	30	2/3	29,94	191,07	23,34	-	-	-	-
	5	2/3	1,68	51,19	120,00	18,08	33,08	48,65	51,19
	10	2/3	7,33	315,94	120,00	36,26	158,15	270,70	315,94
	15	2/3	12,99	550,24	120,00	96,49	310,25	471,98	550,24
	20	2/3	18,64	689,14	120,00	180,12	451,95	612,13	689,14
	25	2/3	24,29	785,10	120,00	309,41	563,06	713,80	785,10
	30	2/3	29,94	858,23	120,00	452,67	653,18	790,94	858,23

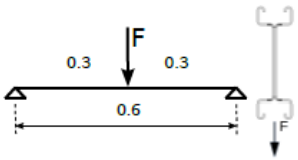
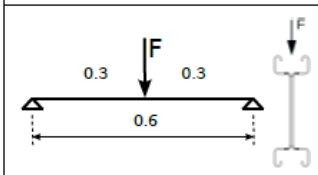
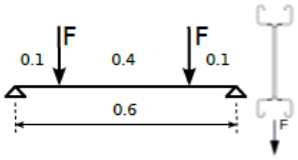
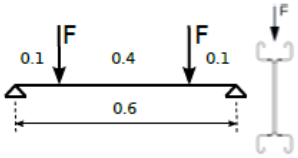
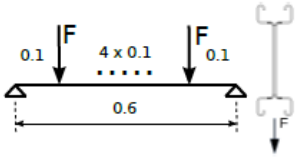
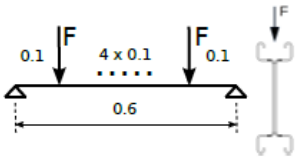
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C25

Deutsches Institut für Bautechnik DIBt

Table C26: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/128/2,5 D with a support span of 0,6 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	548,08	36,67	120,00	9,79	26,41	34,84	36,67
	10	1/2	1108,08	50,97	71,67	14,68	41,36	-	-
	15	1/2	1668,08	39,91	40,00	20,18	-	-	-
	20	1/2	2228,08	28,98	30,00	28,98	-	-	-
	25	1/2	2788,08	27,16	26,67	-	-	-	-
	30	1/2	3348,08	25,49	23,34	-	-	-	-
	5	1/2	548,08	126,76	120,00	9,40	30,90	85,89	126,76
	10	1/2	1108,08	254,91	120,00	17,90	151,59	229,64	254,91
	15	1/2	1668,08	19,84	23,34	-	-	-	-
	20	1/2	2228,08	6,62	20,01	-	-	-	-
	25	1/2	2788,08	8,02	20,01	-	-	-	-
	30	1/2	3348,08	6,60	18,34	-	-	-	-
	5	5/6	822,12	43,66	120,00	11,02	30,34	41,03	43,66
	10	5/6	1662,12	30,60	38,33	17,17	-	-	-
	15	5/6	2502,12	22,02	28,34	-	-	-	-
	20	5/6	3342,12	19,69	23,34	-	-	-	-
	25	5/6	4182,12	17,37	21,67	-	-	-	-
	30	5/6	5022,12	14,44	20,01	-	-	-	-
	5	5/6	822,12	235,32	120,00	11,13	72,80	189,00	235,32
	10	5/6	1662,12	28,31	25,00	-	-	-	-
	15	5/6	2502,12	7,03	20,01	-	-	-	-
	20	5/6	3342,12	6,57	18,34	-	-	-	-
	25	5/6	4182,12	6,65	16,68	-	-	-	-
	30	5/6	5022,12	6,36	13,34	-	-	-	-
	5	2/3	182,69	38,15	120,00	10,26	27,56	36,31	38,15
	10	2/3	369,36	48,46	56,67	15,62	-	-	-
	15	2/3	556,03	33,96	33,33	21,94	-	-	-
	20	2/3	742,69	27,33	28,34	-	-	-	-
	25	2/3	929,36	25,64	25,00	-	-	-	-
	30	2/3	1116,03	16,80	21,67	-	-	-	-
	5	2/3	182,69	29,10	61,67	10,05	28,08	-	-
	10	2/3	369,36	127,24	60,00	20,43	127,24	-	-
	15	2/3	556,03	220,56	50,00	128,91	-	-	-
	20	2/3	742,69	7,23	20,01	-	-	-	-
	25	2/3	929,36	9,15	20,01	-	-	-	-
	30	2/3	1116,03	7,26	18,34	-	-	-	-

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex C26**
Bending characteristic of the channel under fire exposure	

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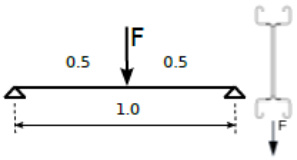
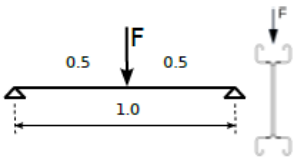
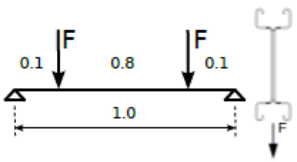
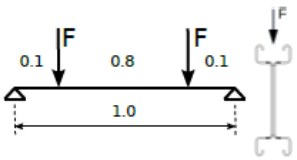
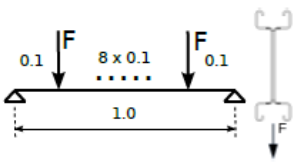
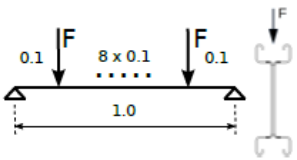
Table C27: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/128/2,5 D with a support span of 1,0 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	316,13	40,44	120,00	11,62	29,29	38,45	40,44
	10	1/2	652,13	170,51	98,33	20,53	133,18	165,80	-
	15	1/2	988,13	33,80	28,34	-	-	-	-
	20	1/2	1324,13	25,71	23,34	-	-	-	-
	25	1/2	1660,13	17,04	21,67	-	-	-	-
	30	1/2	1996,13	11,79	20,01	-	-	-	-
	5	1/2	316,13	220,50	120,00	13,40	74,62	175,95	220,50
	10	1/2	652,13	392,31	120,00	102,85	294,62	362,28	392,31
	15	1/2	988,13	6,33	20,01	-	-	-	-
	20	1/2	1324,13	8,01	20,01	-	-	-	-
	25	1/2	1660,13	6,86	18,34	-	-	-	-
	30	1/2	1996,13	6,83	16,68	-	-	-	-
	5	9/10	790,34	104,21	120,00	23,08	75,54	97,22	104,21
	10	9/10	1630,34	20,43	25,00	-	-	-	-
	15	9/10	2470,34	14,62	21,67	-	-	-	-
	20	9/10	3310,34	10,67	20,01	-	-	-	-
	25	9/10	4150,34	9,02	18,34	-	-	-	-
	30	9/10	4990,34	11,15	18,34	-	-	-	-
	5	9/10	790,34	347,44	120,00	44,14	241,80	319,04	347,44
	10	9/10	1630,34	9,96	21,67	-	-	-	-
	15	9/10	2470,34	8,84	20,01	-	-	-	-
	20	9/10	3310,34	7,90	18,34	-	-	-	-
	25	9/10	4150,34	7,90	15,01	-	-	-	-
	30	9/10	4990,34	6,58	11,68	-	-	-	-
	5	2/3	63,23	48,88	120,00	12,83	32,64	45,58	48,88
	10	2/3	130,43	366,99	120,00	23,58	260,98	335,12	366,99
	15	2/3	197,63	26,77	26,67	-	-	-	-
	20	2/3	264,83	15,40	21,67	-	-	-	-
	25	2/3	332,03	21,26	21,67	-	-	-	-
	30	2/3	399,23	14,31	20,01	-	-	-	-
	5	2/3	63,23	101,05	120,00	13,17	54,60	87,70	101,05
	10	2/3	130,43	356,29	120,00	44,97	199,76	308,59	356,29
	15	2/3	197,63	420,67	120,00	157,07	329,91	393,22	420,67
	20	2/3	264,83	455,63	120,00	305,24	390,90	437,10	455,63
	25	2/3	332,03	7,41	18,34	-	-	-	-
	30	2/3	399,23	8,68	18,34	-	-	-	-

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex C27**
Bending characteristic of the channel under fire exposure	

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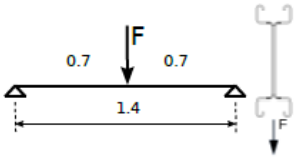
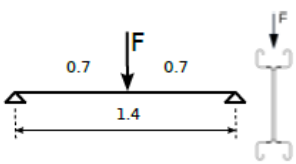
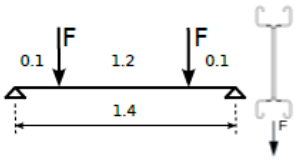
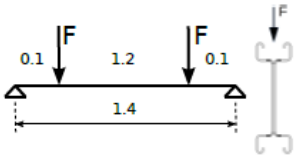
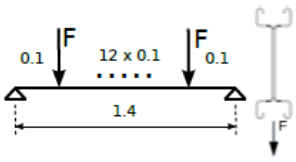
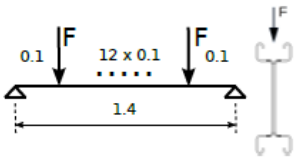
Table C28: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/128/2,5 D with a support span of 1,4 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	212,19	371,43	120,00	15,34	134,79	306,50	371,43
	10	1/2	452,19	604,65	120,00	152,14	475,22	564,88	604,65
	15	1/2	692,19	12,13	21,67	-	-	-	-
	20	1/2	932,19	22,44	21,67	-	-	-	-
	25	1/2	1172,19	12,28	20,01	-	-	-	-
	30	1/2	1412,19	9,58	18,34	-	-	-	-
	5	1/2	212,19	380,61	120,00	24,88	220,51	337,07	380,61
	10	1/2	452,19	556,09	120,00	257,08	448,33	522,94	556,09
	15	1/2	692,19	44,82	21,67	-	-	-	-
	20	1/2	932,19	33,13	20,01	-	-	-	-
	25	1/2	1172,19	13,03	18,34	-	-	-	-
	30	1/2	1412,19	6,11	11,68	-	-	-	-
	5	13/14	742,66	331,97	120,00	68,54	245,60	308,60	331,97
	10	13/14	1582,66	11,11	21,67	-	-	-	-
	15	13/14	2422,66	9,50	20,01	-	-	-	-
	20	13/14	3262,66	9,21	18,34	-	-	-	-
	25	13/14	4102,66	11,75	18,34	-	-	-	-
	30	13/14	4942,66	12,74	16,68	-	-	-	-
	5	13/14	742,66	478,18	120,00	150,23	381,55	452,87	478,18
	10	13/14	1582,66	7,20	20,01	-	-	-	-
	15	13/14	2422,66	7,72	18,34	-	-	-	-
	20	13/14	3262,66	9,85	18,34	-	-	-	-
	25	13/14	4102,66	8,69	13,34	-	-	-	-
	30	13/14	4942,66	8,86	11,68	-	-	-	-
	5	2/3	30,31	143,75	120,00	17,72	56,53	105,24	143,75
	10	2/3	64,60	489,82	120,00	47,75	353,09	447,80	489,82
	15	2/3	98,88	52,72	25,00	-	-	-	-
	20	2/3	133,17	25,99	21,67	-	-	-	-
	25	2/3	167,46	15,51	20,01	-	-	-	-
	30	2/3	201,74	29,90	20,01	-	-	-	-
	5	2/3	30,31	139,15	120,00	19,97	81,39	122,46	139,15
	10	2/3	64,60	457,80	120,00	72,31	263,67	394,71	457,80
	15	2/3	98,88	555,31	120,00	197,13	427,24	515,39	555,31
	20	2/3	133,17	604,18	120,00	382,10	510,61	575,17	604,18
	25	2/3	167,46	634,51	120,00	469,09	560,17	611,54	634,51
	30	2/3	201,74	12,23	18,34	-	-	-	-

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C28

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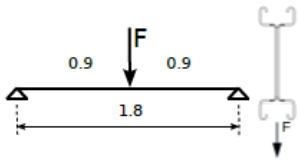
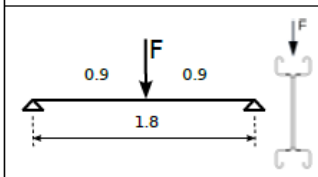
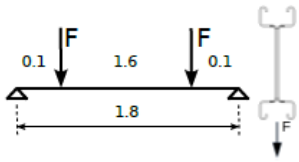
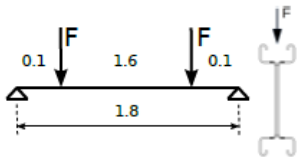
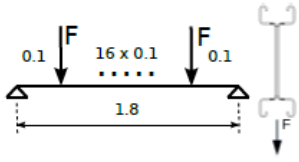
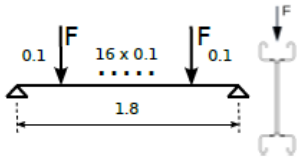
Table C29: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/128/2,5 D with a support span of 1,8 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	150,91	524,60	120,00	27,64	342,83	478,24	524,60
	10	1/2	337,58	738,10	120,00	359,65	608,11	698,33	738,10
	15	1/2	524,24	23,05	21,67	-	-	-	-
	20	1/2	710,91	11,84	20,01	-	-	-	-
	25	1/2	897,58	10,37	18,34	-	-	-	-
	30	1/2	1084,24	12,53	18,34	-	-	-	-
	5	1/2	150,91	542,11	120,00	54,33	382,43	499,18	542,11
	10	1/2	337,58	724,10	120,00	402,07	608,05	688,49	724,10
	15	1/2	524,24	11,76	20,01	-	-	-	-
	20	1/2	710,91	10,45	18,34	-	-	-	-
	25	1/2	897,58	13,63	16,68	-	-	-	-
	30	1/2	1084,24	28,74	15,01	-	-	-	-
	5	17/18	679,09	469,12	120,00	161,68	363,37	439,41	469,12
	10	17/18	1519,09	8,38	20,01	-	-	-	-
	15	17/18	2359,09	15,47	20,01	-	-	-	-
	20	17/18	3199,09	11,87	18,34	-	-	-	-
	25	17/18	4039,09	12,59	15,01	-	-	-	-
	30	17/18	4879,09	11,04	11,68	-	-	-	-
	5	17/18	679,09	612,02	120,00	226,63	513,13	593,66	612,02
	10	17/18	1519,09	8,44	20,01	-	-	-	-
	15	17/18	2359,09	9,47	18,34	-	-	-	-
	20	17/18	3199,09	10,83	16,68	-	-	-	-
	25	17/18	4039,09	9,41	11,68	-	-	-	-
	30	17/18	4879,09	8,31	10,01	-	-	-	-
	5	2/3	16,77	207,15	120,00	27,05	93,47	159,31	207,15
	10	2/3	37,51	608,84	120,00	84,57	441,43	556,63	608,84
	15	2/3	58,25	708,27	120,00	397,50	585,00	668,13	708,27
	20	2/3	78,99	45,13	21,67	-	-	-	-
	25	2/3	99,73	28,24	20,01	-	-	-	-
	30	2/3	120,47	14,48	18,34	-	-	-	-
	5	2/3	16,77	185,31	120,00	33,04	111,41	162,92	185,31
	10	2/3	37,51	554,79	120,00	102,33	334,51	482,70	554,79
	15	2/3	58,25	686,29	120,00	250,46	522,64	633,20	686,29
	20	2/3	78,99	751,56	120,00	456,94	626,06	711,18	751,56
	25	2/3	99,73	790,85	120,00	568,34	689,57	758,69	790,85
	30	2/3	120,47	196,44	20,01	-	-	-	-

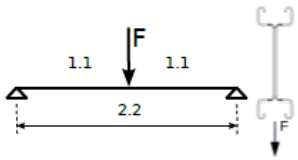
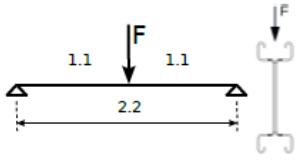
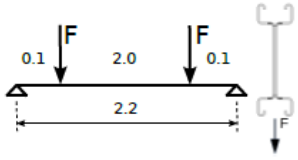
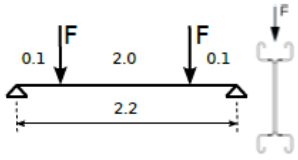
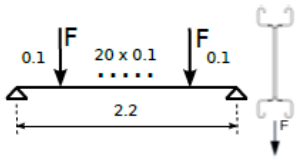
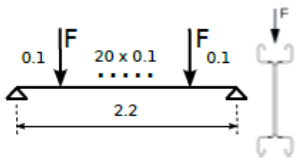
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C29

Deutsches Institut für Bautechnik DIBt

Table C30: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/128/2,5 D with a support span of 2,2 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	109,02	692,82	120,00	96,23	517,24	646,03	692,82
	10	1/2	261,75	894,97	120,00	516,29	768,69	858,57	894,97
	15	1/2	414,48	986,08	120,00	722,50	885,29	955,93	986,08
	20	1/2	567,21	26,13	20,01	-	-	-	-
	25	1/2	719,93	13,52	18,34	-	-	-	-
	30	1/2	872,66	14,47	16,68	-	-	-	-
	5	1/2	109,02	705,43	120,00	139,82	541,05	661,11	705,43
	10	1/2	261,75	895,60	120,00	547,76	773,39	859,47	895,60
	15	1/2	414,48	973,89	120,00	741,31	883,15	947,24	973,89
	20	1/2	567,21	6,08	10,01	-	-	-	-
	25	1/2	719,93	26,66	16,68	-	-	-	-
	30	1/2	872,66	74,62	15,01	-	-	-	-
	5	21/22	599,63	621,44	120,00	236,65	511,66	599,72	621,44
	10	21/22	1439,63	10,02	20,01	-	-	-	-
	15	21/22	2279,63	11,71	18,34	-	-	-	-
	20	21/22	3119,63	14,77	16,68	-	-	-	-
	25	21/22	3959,63	12,66	11,68	-	-	-	-
	30	21/22	4799,63	10,91	10,01	-	-	-	-
	5	21/22	599,63	776,39	120,00	277,64	651,96	753,16	776,39
	10	21/22	1439,63	10,13	20,01	-	-	-	-
	15	21/22	2279,63	12,05	18,34	-	-	-	-
	20	21/22	3119,63	12,86	13,34	-	-	-	-
	25	21/22	3959,63	9,36	10,01	-	-	-	-
	30	21/22	4799,63	11,73	10,01	-	-	-	-
	5	2/3	9,91	279,98	120,00	41,27	134,26	218,49	279,98
	10	2/3	23,80	724,29	120,00	123,28	527,08	662,20	724,29
	15	2/3	37,68	843,60	120,00	466,95	694,30	794,17	843,60
	20	2/3	51,56	69,04	21,67	-	-	-	-
	25	2/3	65,45	46,13	20,01	-	-	-	-
	30	2/3	79,33	21,72	18,34	-	-	-	-
	5	2/3	9,91	243,94	120,00	49,88	146,48	213,30	243,94
	10	2/3	23,80	652,59	120,00	137,19	412,58	573,34	652,59
	15	2/3	37,68	811,02	120,00	311,98	617,16	746,59	811,02
	20	2/3	51,56	892,59	120,00	529,94	736,58	840,68	892,59
	25	2/3	65,45	942,97	120,00	663,00	813,23	900,46	942,97
	30	2/3	79,33	23,17	16,68	-	-	-	-

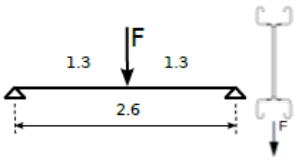
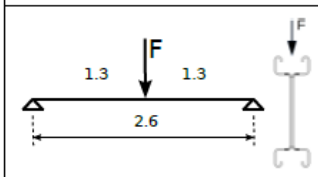
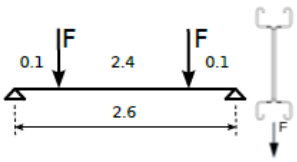
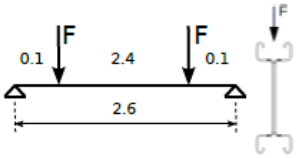
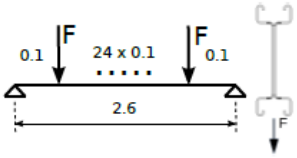
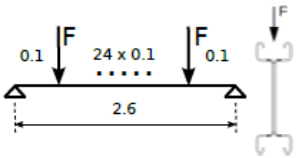
Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D

Bending characteristic of the channel under fire exposure

Annex C30

Deutsches Institut für Bautechnik DIBt

Table C31: Calculation-based deformation under fire exposure for Würth Varifix® C-assembly rail 41/128/2,5 D with a support span of 2,6 m

System and load direction [dimensions in m]	σ_B [N/mm²]	V -	F [N]	$\delta_{tmax,B}$ [mm]	$t_{max,B}$ [min]	δ_{30} [mm]	δ_{60} [mm]	δ_{90} [mm]	δ_{120} [mm]
	5	1/2	77,58	855,59	120,00	265,84	678,64	807,52	855,59
	10	1/2	206,81	1063,15	120,00	662,00	930,86	1025,63	1063,15
	15	1/2	336,04	1185,54	120,00	857,22	1057,02	1145,43	1185,54
	20	1/2	465,27	14,16	18,34	-	-	-	-
	25	1/2	594,50	15,94	16,68	-	-	-	-
	30	1/2	723,73	37,03	16,68	-	-	-	-
	5	1/2	77,58	869,09	120,00	294,54	697,48	822,20	869,09
	10	1/2	206,81	1069,55	120,00	693,65	939,73	1032,41	1069,55
	15	1/2	336,04	1152,69	120,00	899,36	1056,84	1124,56	1152,69
	20	1/2	465,27	33,44	18,34	-	-	-	-
	25	1/2	594,50	52,37	16,68	-	-	-	-
	30	1/2	723,73	12,85	10,01	-	-	-	-
	5	25/26	504,28	802,79	120,00	308,63	648,54	766,77	802,79
	10	25/26	1344,28	12,46	20,01	-	-	-	-
	15	25/26	2184,28	16,65	18,34	-	-	-	-
	20	25/26	3024,28	13,48	11,68	-	-	-	-
	25	25/26	3864,28	12,32	10,01	-	-	-	-
	30	25/26	4704,28	10,97	8,35	-	-	-	-
	5	25/26	504,28	940,65	120,00	357,84	795,45	915,36	940,65
	10	25/26	1344,28	12,86	20,01	-	-	-	-
	15	25/26	2184,28	14,58	16,68	-	-	-	-
	20	25/26	3024,28	14,58	11,68	-	-	-	-
	25	25/26	3864,28	12,98	10,01	-	-	-	-
	30	25/26	4704,28	11,37	8,35	-	-	-	-
	5	2/3	5,97	372,48	120,00	59,52	182,51	294,58	372,48
	10	2/3	15,91	837,08	120,00	166,33	611,99	765,50	837,08
	15	2/3	25,85	975,57	120,00	535,56	800,60	916,70	975,57
	20	2/3	35,79	96,00	21,67	-	-	-	-
	25	2/3	45,73	67,03	20,01	-	-	-	-
	30	2/3	55,67	32,91	18,34	-	-	-	-
	5	2/3	5,97	317,46	120,00	70,34	190,39	277,60	317,46
	10	2/3	15,91	752,56	120,00	179,16	495,97	667,16	752,56
	15	2/3	25,85	931,34	120,00	379,53	711,86	857,49	931,34
	20	2/3	35,79	1028,04	120,00	605,37	843,92	965,46	1028,04
	25	2/3	45,73	1089,79	120,00	755,36	932,32	1036,73	1089,79
	30	2/3	55,67	1131,86	120,00	849,59	995,37	1086,59	1131,86

Varifix® C-assembly rail 41/22/2,5, 41/41/2,5, 41/62/3, 41/86/2 D and 41/128/2,5 D	**Annex C31**
Bending characteristic of the channel under fire exposure	