

# HEAVY DUTY ALL-METAL EXPANSION JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS

HARD WEARING, MAINTENANCE-FREE AND LONG LASTING



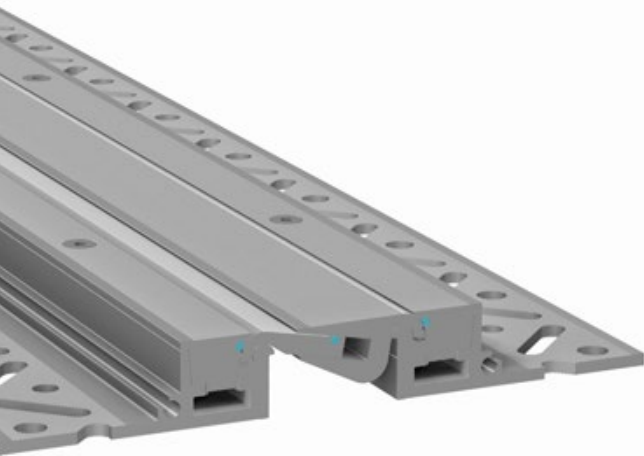
**MIGUTRANS**

# YOU FIRST.

MIGUA is one of Europe's leading experts in the design, manufacture and installation of expansion joint systems. MIGUA expansion joint systems serve to cover, close and seal expansion joints. Our products satisfy the most rigorous standards in quality and safety and are widely used in large-scale construction projects such as airports, train stations, industrial plants, parking structures, shopping centres and hospitals. Every day, our experienced team do their utmost to make your building project successful. We are not satisfied until you are satisfied. Because our guiding principle is: **MIGUA – you first.**

## **Over 600 products for one purpose: Yours.**

With five brands and over 600 proven expansion joint systems, we've got the diverse structural needs of today's construction projects covered. We confront problems such as heavy traffic loads and meet exacting standards in water resistance or hygiene. Floors, walls or roofs, MIGUA offers the perfect solution for any surface. Products of the highest quality are fundamental to our business; yet our ultimate priority is always customer satisfaction. We offer you a wide range of services to make your building project successful: Starting with competent advice, followed by technical application support on site up to the complete installation service. And since we know that the requirements for expansion joints are just as individual as the buildings themselves, we gladly develop your own very special joint cover system solution based on your requirements. And that is what we call our MIGUA 360° Service.



# MIGUTEC

JOINT COVERS FOR  
EXPANSION JOINTS

## MIGUTRANS

HEAVY-DUTY ALL-METAL  
JOINT SOLUTIONS FOR  
LARGE TRAFFIC LOADS

## MIGUTAN

WATERTIGHT EXPANSION  
JOINT SOLUTIONS

## MIGUPREN

EXPANSION JOINT STRIPS  
TO SEAL JOINTS WITH  
THREE-DIMENSIONAL MOVEMENT

## MIGUMAX

SEISMIC RESISTANT  
EXPANSION JOINT SOLUTIONS

# 360°

MIGUA 360° SERVICE

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## WITH MIGUTRANS, MIGUA OFFERS A COMPREHENSIVE RANGE OF **SOLID FULL METAL EXPANSION JOINT COVERS FOR FLOORS WITH HIGH TRAFFIC LOADS.**

Today's modern architecture for shopping centres, stations, airports, trade centres or hospitals must meet a wide range of functions and accordingly withstand a variety of loads. The bandwidth extends from the light loads imposed by foot traffic, to cars and trucks, and through to the highest spot loads exerted by lifting trucks and forklifts. Expansion and building joints subject to traffic loads are particularly critical areas in the structure of buildings. Added to this are, depending on requirements, further criteria such as vibration-free driving for sensitive items, the ability to retrofit when renovating, or requirements with regard to special resistance to chemical attack and environmental influences through to water-proofing.

MIGUTRANS from MIGUA offers planners and architects a wide range of wear-resistant, main-

tenance free and long-lasting expansion joint constructions for demanding construction projects.

A user-oriented, high-quality and internationally tried and tested range of expansion joints which meet the varying functional and aesthetic requirements of innovative architecture.

In addition to the delivery of our products, we also offer you the complete and professional installation of our expansion joint covers by carefully selected, competent specialist companies. Please do not hesitate to contact us. To get to know more about our MIGUA installation partners, kindly take a look at [migua.com/en/service](http://migua.com/en/service).





## Test certificates






Official test certificates attesting to the payload are available and may be supplied on request.

## Important notes

With low expansion joint heights, the low coverage requires epoxy resin strips with a bonding coat to be used.

In wet areas (industrial kitchens, sanitary rooms etc.) solid stainless steel expansion joint covers or our watertight MIGUTAN expansion joint constructions are to be used.

## Specifications regarding the load capacity

Pictogram					
Meaning	Pedestrians	Private cars	Lorries DIN 1072	Forklift trucks DIN 1055	Hard castors

The load specifications of air-filled and solid plastic tyre trucks apply to a wheel contact patch of 200 x 200 mm.

## Special features

Absolutely equal height connection of the expansion joint cover lengths thanks to connecting pins or the insertion of brackets into one another.

Factory mounted spacers ensure joint covers set to mean point which in turn ensures economic installation and safe functional seating of the expansion joint construction.

Factory presetting of the profiles is available on request – thereby maximising the movement absorption.

## Note on installation

Please contact us for assembly and installation instructions, if required. Alternatively, installation instructions are available at [migua.com](http://migua.com) for download.



When installing the MIGUTRANS joint constructions in mastic asphalt coverings, please contact us for technical advice.

## Standard mounting

A detailed list of standard mounting is available on our website.





## MIGUARCHITECT.COM THE MODULAR PLANNING SYSTEM IN WEB PAGE FORMAT

With the website [miguarchitect.com](http://miguarchitect.com), MIGUA now offers an innovative work aid especially for architects and planners. This bespoke website was developed in the form of a working tool that contains information relevant only to planning. In addition to tender

texts and BIM files, the site also offers cleverly prepared basic know-how on the subject of planning with joints.

Miguarchitect.com was awarded the German Innovation Award 2019.



## SETTING NEW STANDARDS ALSO IN DESIGN



There is much more to MIGUA expansion joint covers than their high quality and impressive functionality. The newly developed 'Generation X' MIGUTRANS joint covers also meet high design standards in building architecture. The distinctive stylistic vocabulary the smooth surface design is indicative of this. This special structure ensures a

harmonious appearance with the new expansion joint covers - they are all marked with an X behind the joint cover designation. Equally innovative is the beautifully designed MIGUA Befestigungsmatrix® (fastening matrix), which allows for a well thought-out, flexible positioning of the screws and thus easier installation.

## EFFICIENT PLANNING OF JOINTS WITH BIM

MIGUA is the first expansion joint cover manufacturer in Germany to support architects and planners in the efficient planning of joints using BIM objects. And that involves everything from the early design phase to the concrete execution.

This means that even in the early planning phase (service phase 3), when hardly any exact information is available about the joint cover required in the future – such as joint width, required

movement absorption and load – initial planning can be carried out very easily with a basic file, the so-called MIGUA BIM Basic. Once detailed requirements for the expansion joint cover are known (service phase 5), the planner can complete his work with the concrete BIM object without any additional effort.

BIM objects are currently available for the watertight (MIGUTAN) and full metal joint profile systems (MIGUTRANS).

## INNOVATIVE AND SUSTAINABLE SOLUTION FOR REFURBISHMENT AND MODERNISATION

With the FSRX, MIGUA has developed a joint cover that can be replaced quickly, easily and in a cost-effective manner during operation. With this replaceable full metal joint cover, only the visible, most heavily loaded part of the joint cover is unscrewed and replaced by a new one. Time-consuming dismantling and removal of the adjacent floor covering is no longer necessary with this design. Above all, the clear advantage and added value for investors here is the reduced downtime of

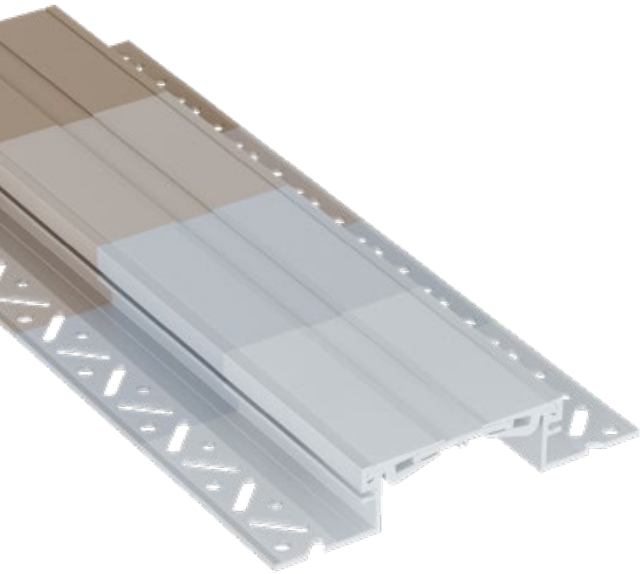
the respective areas, in addition to the time saved and the minimised wage and material costs resulting from it.

In addition, the joint cover contributes to sustainability, as far less material is required for the renovation / modernisation with regard to the joint cover itself and the floor covering. The FSRX was honored with the German Innovation Award and was granted the European and US patent.



**GERMAN  
INNOVATION  
AWARD '19  
WINNER**





## MIGUTRANS EXPANSION JOINT COVER

### NOW ALSO AVAILABLE IN ANODISED COLOUR

Expansion joint covers can now be integrated into your projects in a variety of colour shades. This allows you more freedom of design when using expansion joint covers. Although initially available in just three colour

shades, we now also offer the option of defining homogeneous surfaces. And if these do not meet the demands of your current project, we will be happy to find the right tone with you on request.

#### Notes




Anodising hardens the surface, but scratches cannot be ruled out if the joint cover is subjected to mechanical stress.

Slight colour and/or gloss deviations between different batches or deliveries do not constitute grounds for complaint.

The processing is carried out according to DIN 17611 (German Institute for Standardisation) and the Qualanod regulations for anodising aluminium. The joint covers

must be cleaned and maintained in accordance with Qualanod's specifications and the A5 leaflet of the Aluminiumzentrale (Aluminium Headquarters). We also offer personalised consultation on request.

Standard colours of anodised joint covers according to the EURAS colour chart:

-  Anodised Nature
-  Light
-  Light bronze

Further variations in colours are available on request.



## JOINT WIDTH

Please find your expansion joint cover according to the required joint width here.

Joint width	Expansion joint cover	Page
30 mm	FS 50	13
	STS 160	37
35 mm	FS 40	12
	FS 46	12
	FS 135	24
	STS 100	36
	STW 100	39
50 mm	FSX 75	14
	FSL 77	15
	SFS 90	16
	FS 100	34
	FS 255	42
	FSRX 111	48
60 mm	FSS 215	35
	STS 160	37
	STW 160	40
	FS 220	41
70 mm	FS 99	17
	FS 174	24
75 mm	SFS 115	16
	FSX 105	19
	FSX 110	20
	FS 110 ES	21
	FSRX 139	48
	FSRX 144	48
80 mm	FSL 104	18
90 mm	FSL 113	22
	FS 295	42
100 mm	SFS 135	16
	FSX 130	23
	FS 260	41
	FSRX 168	48
116 mm	FSRX 180	48
117 mm	FSX 146	25
120 mm	FSX 155	49
130 mm	FSX 160	27
	FSRX 196	48
135 mm	FS 167	28
140 mm	FS 185	29
150 mm	FSV 235	30
200 mm	FSV 280	31
205 mm	FS 410	42
215 mm	FS 380	41
240 mm	FSV 285	32
250 mm	FSV 335	33

## LOAD BEARING CAPACITY

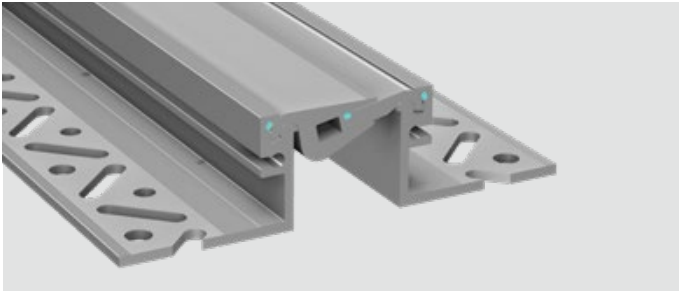
Find your expansion joint cover here using the specification for the maximum load of industrial trucks with hard plastic tyres.

Load bearing capacity	Expansion joint cover	Page
Private cars	FSL 77	15
	FS 99	17
	FS 110 ES	21
	FSL 113	22
	FSV 285	32
	FSV 335	33
3 kg/mm	FS 50	13
3,5 kg/mm	FSL 104	18
	FSX 146	25
	FSRX 180	48
6,5 kg/mm	FS 40	12
	FS 46	12
	SFS 90	16
	SFS 115	16
	SFS 135	16
	FSX 110	20
	FSX 130	23
	FSX 160	27
	FS 185	29
	FSV 235	30
FSV 280	31	
9 kg/mm	FS 100	34
10 kg/mm	FSX 75	14
	FSRX 111	48
	FSRX 144	48
	FSRX 168	48
	FSRX 196	48
	FSX 105	19
15 kg/mm	FS 174	24
	FS 155	49
	FS 220	41
	FS 260	41
	FS 380	41
	FS 255	42
	FS 295	42
	FS 410	42
	FSRX 139	48
	15-20 kg/mm	FS 167
30 kg/mm	FS 135	24
	FSS 215	35
75 kg/mm	STS 100	36
	STS 160	37
	STW 100	39
	STW 160	40

## ALPHABETICAL ORDER

Expansion joint cover	Page
FS 40 / 46	12
FS 50	13
FSX 75	14
FS 99	17
FS 100	33
FSX 105	19
FSX 110	20
FS 110 ES	21
FSX 130	23
FS 135 / FS 174	24
FSX 146	25
FSX 155	26
FSX 160	27
FS 167	28
FS 185	29
FS 220 / FS 260 / FS 380	41
FS 255 / FS 295 / FS 410	42
FSL 77	15
FSL 104	18
FSL 113	22
FSN	47
FSN 50	43
FSN 99	44
FSN/FSNX	46
FSNX 146	45
FSRX ... 30	48
FSS 215	34
FSV 235	29
FSV 280	30
FSV 285	31
FSV 335	32
SFS 90 / 115 / 135	16
STS 100	35
STS 160	36
STS 160/16 / STS 160/22	37
STW 100	38
STW 160	39

## EXPANSION JOINTS ACCORDING TO AREAS OF APPLICATION

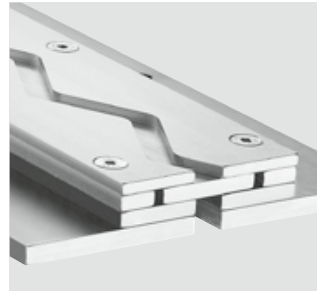


### FSX/FS – Joints for high load requirements

For a variety of applications, the traffic loads to be planned e.g. imposed by cars, lie within a normal range. MIGUA offers three tried and tested product lines for this application. No compromises are made with regard to freedom from maintenance, wear-resistance and durability thanks to the robust construction which uses solid full aluminium and mature technical 3D joint constructions.

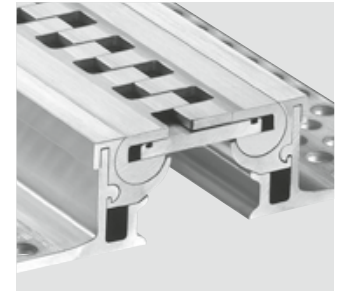
Higher traffic loads must be taken into consideration, in particular for public sector or industrial projects. MIGUA offers the most comprehensive

range for this particular sector including a range of different planning parameters. The key criteria are pronounced movement abilities, wear-resistance and durability under load and are effectively met by these profile constructions thanks to the individually adapted joint technologies.



### STS/STW – Expansion joints for maximum load bearing (wassertight)

With the STS/STW product line, MIGUA offers a programme with aluminium/steel/stainless steel constructions for highest traffic loads by industrial trucks, heavy duty trucks or special vehicles. This product line is characterized by the continuous vibration-free traversability, through which damage to the building structure and vehicles is reduced effectively. The extremely robust securing constructions ensure reliable horizontal movement absorption across and parallel to the joint. All STW versions are additionally waterproof.



### FS/FSS – Joints for vibration-free driving

Vibration-free driving is particularly relevant for the transportation of sensitive wares. The solid full aluminium expansion joint constructions FS/FSS meet this requirement in a particularly maintenance-free, wear-resistant and durable way. Fully moveable (FS 100) or with two-dimensional absorption of movement (FSS) they carry high traffic loads e.g. trucks or forklifts and are thus ideally suited to production and warehousing facilities.

Product	Page	Product	Page
FS 40	12	FS 255	42
FS 46	12	FS 260	41
FS 50	13	FS 295	42
FSX 75	14	FS 380	41
FS 99	17	FS 410	42
FS 100	34	FSL 77	15
FSX 105	19	FSL 104	18
FSX 110	20	FSL 113	22
FS 110 ES	21	FSS 215	35
FSX 130	23	FSV 235	30
FS 135	24	FSV 280	31
FSX 146	25	FSV 285	32
FSX 155	49	FSV 335	33
FSX 160	27	SFS 90	16
FS 167	28	SFS 115	16
FS 174	24	SFS 135	16
FS 185	29	STS 100	36
FS 220	41	STS 160	37

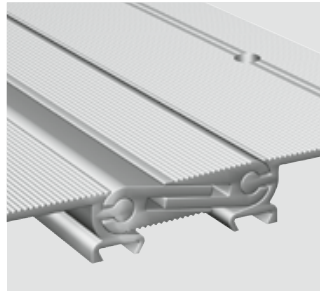
Product	Page
STS 100	36
STS 160	37
STS 160/16	38
STS 160/22	38
STW 100	39
STW 160	40

Product	Page
FSS 215	35
FS 100	34
STW 100	39
STS 100	36
STW 160	40
STS 160	37



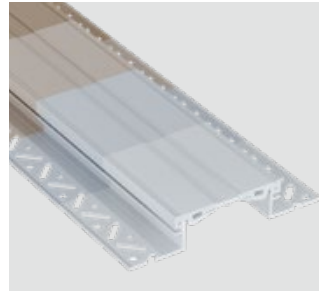
### FS – joint cover for renovation (partly without damaging the covering)

MIGUA has developed joint covers that are anchored by the joint cover itself and therefore do not need the lateral joint cover legs. In this way, joint covers can be replaced or reinstalled in a space-saving and resource-saving manner without causing any significant damage to the adjacent covering.



### FSN – Joints for subsequent installation

MIGUA FSN joint constructions have upper brackets and are thus ideal for subsequent installation, particularly in renovation and modernisation projects. The highly developed joint constructions enable three-dimension movements to be absorbed and ensure maximum functionality even under difficult conditions. Structured surfaces and gap-free visual surfaces ensure high traffic safety.



### Anodised joint covers and FS 110 ES – for special aesthetic requirements

Expansion joint covers are now available in various anodised colours. This allows you more freedom of design when using expansion joint covers. Although initially available in just four colour shades, we now also offer the option of defining homogeneous surfaces. Expansion joint cover FS 110 ES also offers you a choice of different materials - such as structured stainless steel, brass and 3M surfaces.



### FSRX – The inter-changeable joint cover

With the FSR X, MIGUA has developed a joint cover that can be replaced quickly and in a cost-effective manner during operation. With this replaceable full metal joint cover, only the visible, most heavily loaded part of the joint cover is unscrewed and replaced. Time-consuming dismantling and removal of the adjacent floor covering is no longer necessary with this design. Here is the obvious advantage for investors and architects: The reduced downtime of the respective areas, in addition to the time saved and the minimised wage and material costs resulting from it.

Product	Page
FS 220	41
FS 255	42
FS 260	41
FS 295	42
FS 380	41
FS 410	42

Product	Page
FSN 46	46
FSN 50	43
FSNX 75	46
FSN 99	44
FSNX 110	46
FSNX 130	46
FSNX 146	45
FSNX 155	46
FSNX 160	46
FSN 185	46
FSN 285	46

Product	Page
Anodized expansion joint covers	49
FS 110 ES	21

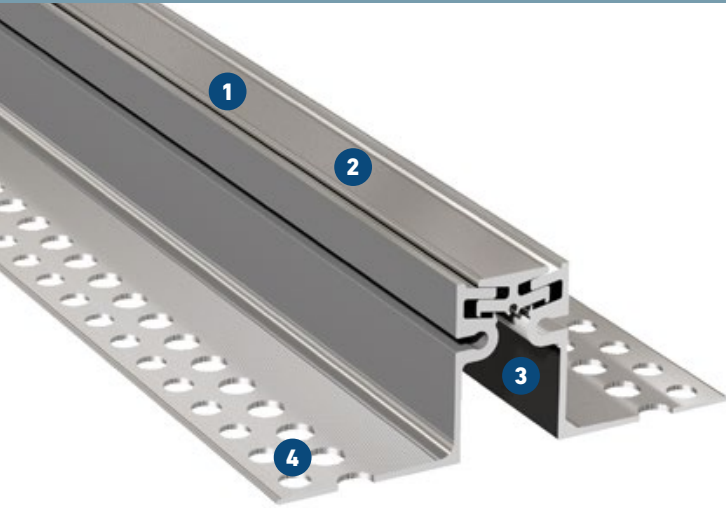
Product	Page
FSRX 111	48
FSRX 139	48
FSRX 144	48
FSRX 168	48
FSRX 180	48
FSRX 196	48

# FS 40 / FS 46

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 Symmetrical visible surface**
- 2 Striated surface**  
ensures good skid resistance
- 3 Solid all-metal expansion joint**  
heard wearing, maintenance-free, long lasting
- 4 MultiHole mounting bracket**  
for secure fixing

### Now available Anodized!

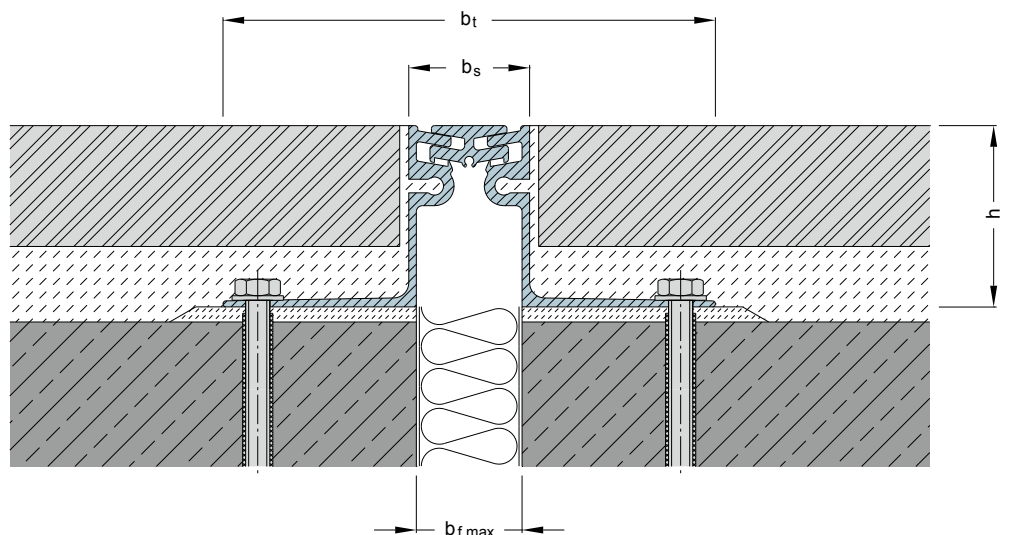
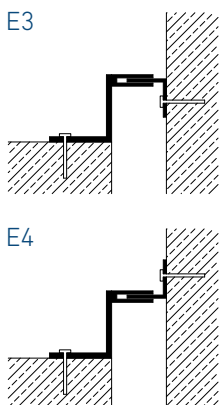
This expansion joint cover is on offer in anodized colours as of now. Available as standard in the four colours shown below, we will be pleased to offer you further colours upon request

Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
FS 40/19	35	16 ( $\pm 8$ )	40	173	19	300	70	6,5
FS 40/25	35	16 ( $\pm 8$ )	40	161	25	300	70	6,5
FS 40/35	35	16 ( $\pm 8$ )	40	163	35	300	70	6,5
FS 40/60	35	16 ( $\pm 8$ )	40	163	60	300	70	6,5
FS 46/50	35	20 ( $\pm 10$ )	46	165	50	300	70	6,5

**Production length:** 4 m

**Standard colour:** Aluminium, available in anodized version, too  
Further installation heights on request.

Corner versions:



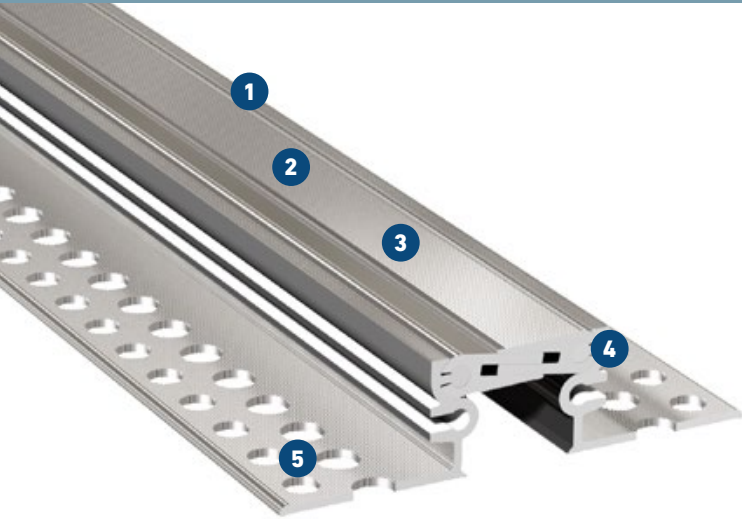


# FS 50

FOR FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 2 Striated surface**  
ensures good skid resistance
- 3 Visible surface has no gaps**  
avoids dirt accumulation
- 4 Articulated telescoping system**  
absorbs movement in 3 directions
- 5 MultiHole mounting bracket**  
for secure fixing

### Now available Anodized!

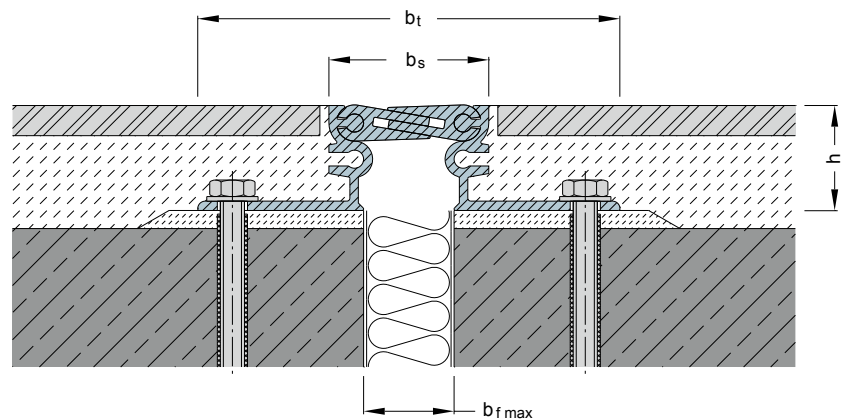
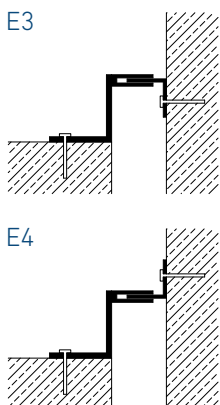
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Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
FS 50/20	30	10 ( $\pm 5$ )	53	140	20	90	35	3
FS 50/35	30	10 ( $\pm 5$ )	53	140	35	90	35	3
FS 50/50	30	10 ( $\pm 5$ )	53	140	50	90	35	3
FS 50/90	30	10 ( $\pm 5$ )	53	138	90	90	35	3

**Production length:** 4 m

**Standard colour:** Aluminium, available in anodized version, too  
Further installation heights on request.

Corner versions:

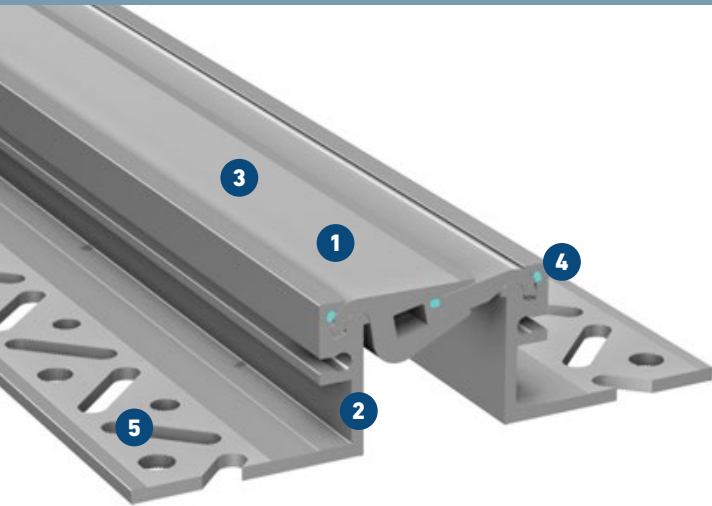


# FSX 75

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 New, improved design**  
Innovative layout of the line
- 2 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system with optimized movement control**  
absorbs movement in 3 directions, with improved shock absorbing elements
- 5 Punctured leg with MIGUA mounting matrix®**  
Provides optimal anchoring alternatives in the underground

### Now available Anodized!

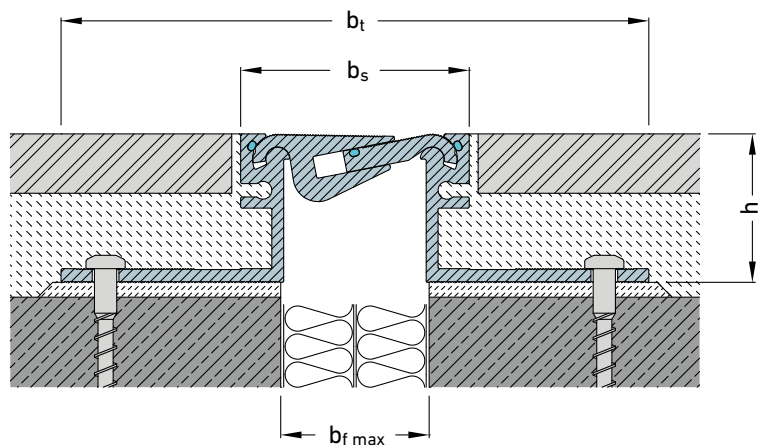
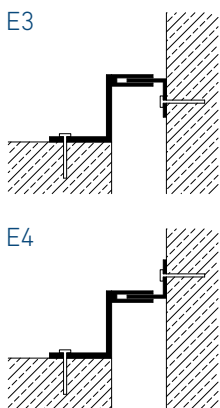
For perfect match with interior design. Different colours can be combined. Color-fast and light resistant.

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	[kN]	[kN]	solid plastic tyres [kg/mm]
FSX 75/22	50	20 ( $\pm 10$ )	77	198	22	300	130	10
FSX 75/30	50	20 ( $\pm 10$ )	77	198	30	300	130	10
FSX 75/40	50	20 ( $\pm 10$ )	77	198	40	300	130	10
FSX 75/50	50	20 ( $\pm 10$ )	77	198	50	300	130	10
FSX 75/60	50	20 ( $\pm 10$ )	77	198	60	300	130	10
FSX 75/80	50	20 ( $\pm 10$ )	77	198	80	300	130	10
FSX 75/100	50	20 ( $\pm 10$ )	77	198	100	300	130	10

**Production length:** 4 m

**Standard colour:** Aluminium, available in anodized version, too  
Further installation heights on request.

Corner versions:

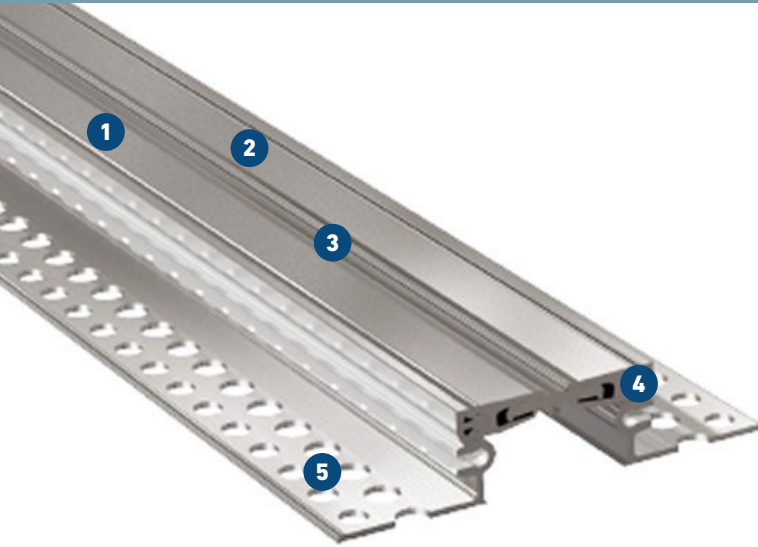


# FSL 77

FOR FLOORS WITH LARGE MOVEMENT – TO BE USED BY LIGHT FORK LIFT TRUCKS AND PALLET TRUCKS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



- 1 Solid all-metal expansion joint cover**  
hard wearing, maintenance-free, long lasting
- 2 Striated surface**  
ensures good skid resistance
- 3 Symmetrical visible surface has no gaps**  
prevents accumulation of dirt
- 4 Articulated telescoping system**  
absorbs movement in 3 directions
- 5 MultiHole mounting bracket**  
for secure fixing

### Now available Anodized!

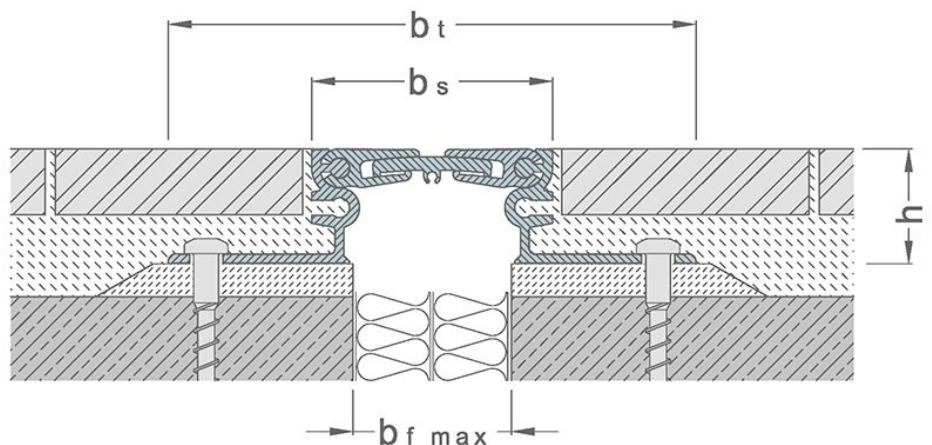
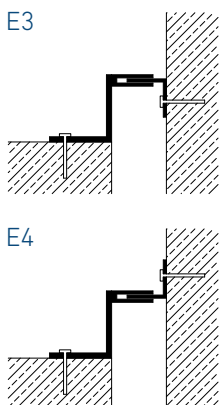
This expansion joint cover is on offer in anodized colours as of now. Available as standard in the four colours shown below, we will be pleased to offer you further colours upon request

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity
	$b_f$ [mm]					
FSL 77/20	50	22 ( $\pm 11$ )	77	164	20	12
FSL 77/35	50	22 ( $\pm 11$ )	77	164	35	12
FSL 77/50	50	22 ( $\pm 11$ )	77	164	50	12
FSL 77/90	50	22 ( $\pm 11$ )	77	164	90	12

**Production length:** 4 m

**Standard colour:** Aluminium, available in anodized version, too  
Further installation heights on request.

Corner versions:

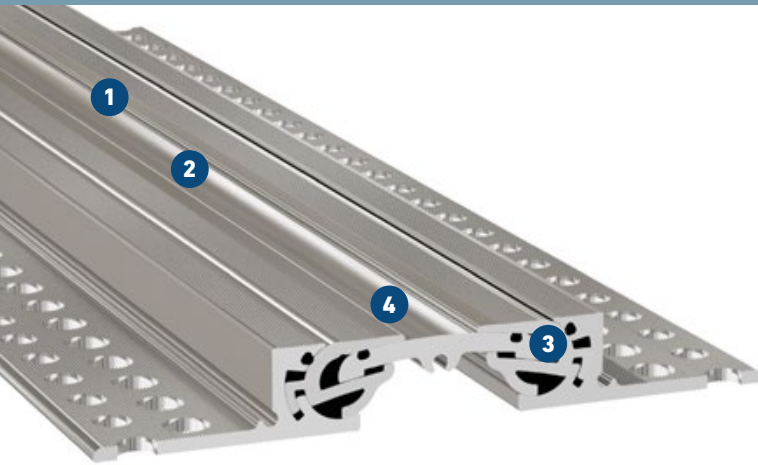


# SFS 90 / 115 / 135

FOR HEAVY DUTY FLOORS

# MIGUTRANS




HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 Improved transit over joints**  
reduces wear on wheels
- 2 Symmetrical visible surface**
- 3 Super efficient design**  
for smoother transit and even load distribution
- 4 Visible surface has no gaps**  
avoids dirt accumulation, easy cleaning
- 5 Minimal vibration when trafficked**  
more efficient and safer work environment

### Now available Anodized!

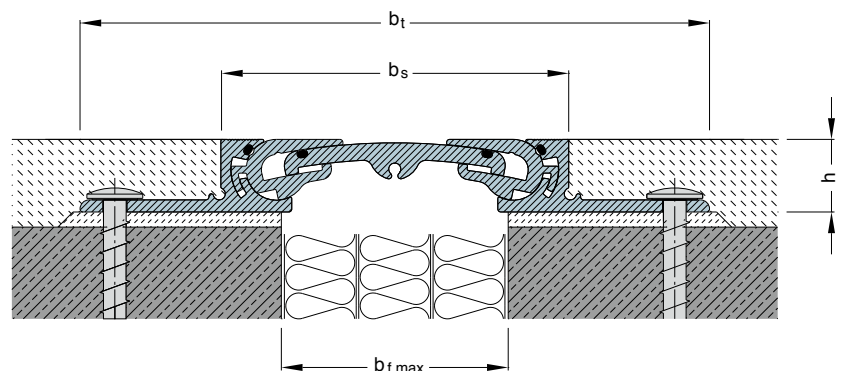
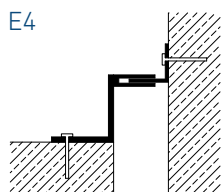
This expansion joint cover is on offer in anodized colours as of now. Available as standard in the four colours shown below, we will be pleased to offer you further colours upon request.

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	 [kN]	 [kN]	 solid plastic tyres [kg/mm]
SFS 90/24	50	20 ( $\pm 10$ )	90	183	24	300	69	6,5
SFS 90/30	50	20 ( $\pm 10$ )	90	183	30	300	69	6,5
SFS 90/42	50	20 ( $\pm 10$ )	90	183	42	300	69	6,5
SFS 115/24	75	30 ( $\pm 15$ )	115	205	24	300	69	6,5
SFS 115/30	75	30 ( $\pm 15$ )	115	205	30	300	69	6,5
SFS 115/42	75	30 ( $\pm 15$ )	115	205	42	300	69	6,5
SFS 135/24	100	40 ( $\pm 20$ )	135	228	24	300	46	6,5
SFS 135/30	100	40 ( $\pm 20$ )	135	228	30	300	46	6,5
SFS 135/42	100	40 ( $\pm 20$ )	135	228	42	300	46	6,5

**Production length:** 4 m

**Standard colour:** Aluminium, SFS 90 also available anodised.  
Larger installation heights on request.

Corner versions:



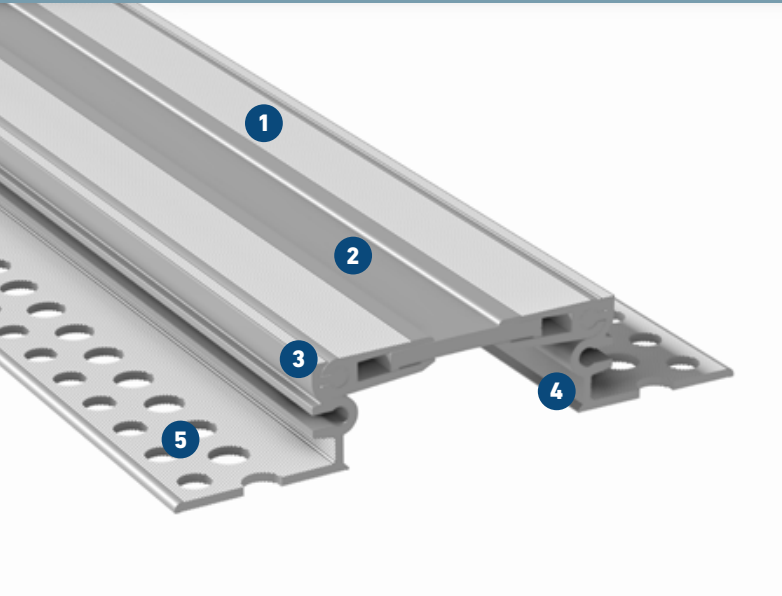


# FS 99


FOR FLOORS WITH LARGE MOVEMENT – TO BE USED BY PRIVATE CARS AND PEDESTRIANS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



- 1 Striated surface**  
ensures good skid resistance
- 2 Symmetrical visible surface shows no gaps**  
avoids dirt accumulation
- 3 Articulated telescoping system**  
absorbs movement in 3 directions
- 4 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 5 MultiHole mounting bracket**  
for secure fixing

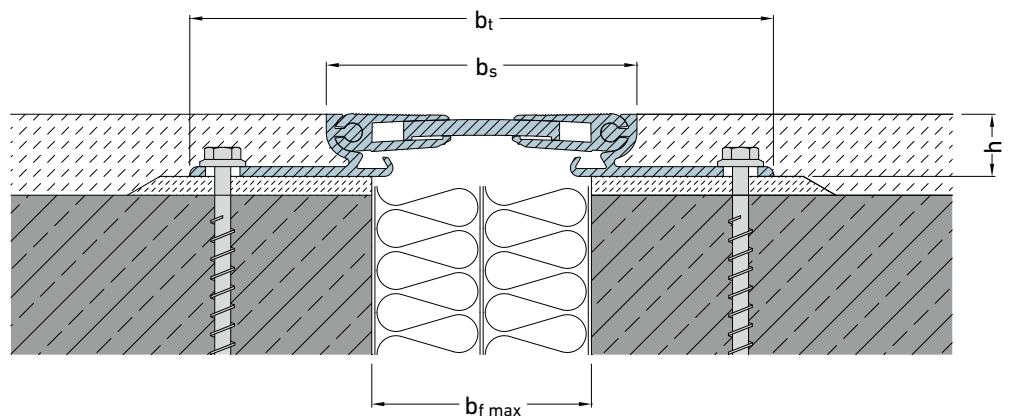
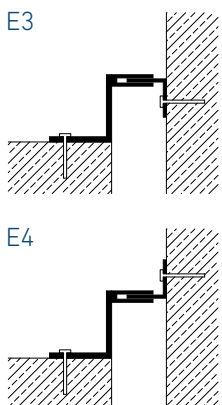
Expansion joint cover	Joint width max.	Total movement	Visible width	Total width		Joint height	Load bearing capacity  [kN]
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$b_t$ [mm]	$h$ [mm]	
FS 99/20	70	40 ( $\pm 20$ )	99	186	186	20	12
FS 99/35	70	40 ( $\pm 20$ )	99	186	186	35	12
FS 99/50	70	40 ( $\pm 20$ )	99	186	186	50	12
FS 99/90	70	40 ( $\pm 20$ )	99	184	184	90	12

**Production length:** 4 m

**Standard colour:** Aluminium

Larger installation heights on request.

Corner versions:

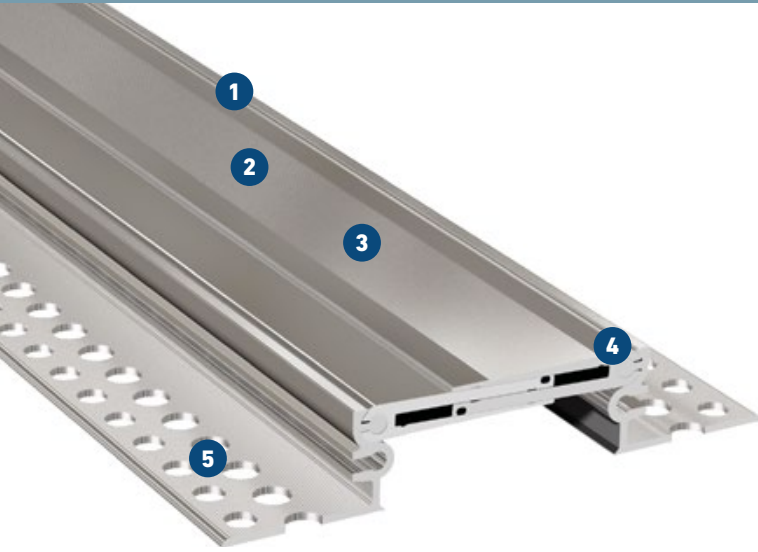


# FSL 104

FOR FLOORS WITH LARGE MOVEMENTS AND REGULAR LOADS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 2 Striated surface**  
ensures good skid resistance
- 3 Visible surface has no gaps**  
avoids dirt accumulation
- 4 Articulated telescoping system**  
absorbs movement in 3 directions
- 5 MultiHole mounting bracket**  
for secure fixing

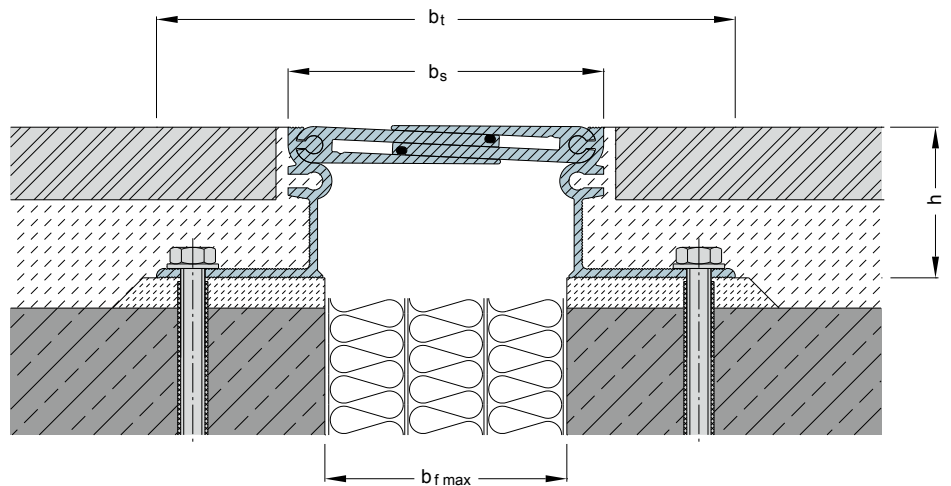
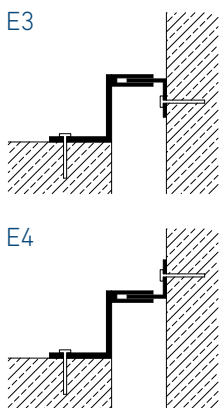
Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
FSL 104/20	80	40 ( $\pm 20$ )	104	191	20	90	35	3,5
FSL 104/35	80	40 ( $\pm 20$ )	104	191	35	90	35	3,5
FSL 104/50	80	40 ( $\pm 20$ )	104	191	50	90	35	3,5
FSL 104/90	80	40 ( $\pm 20$ )	104	189	90	90	35	3,5

**Production length:** 4 m

**Standard colour:** Aluminium

Larger installation heights on request.

Corner versions:

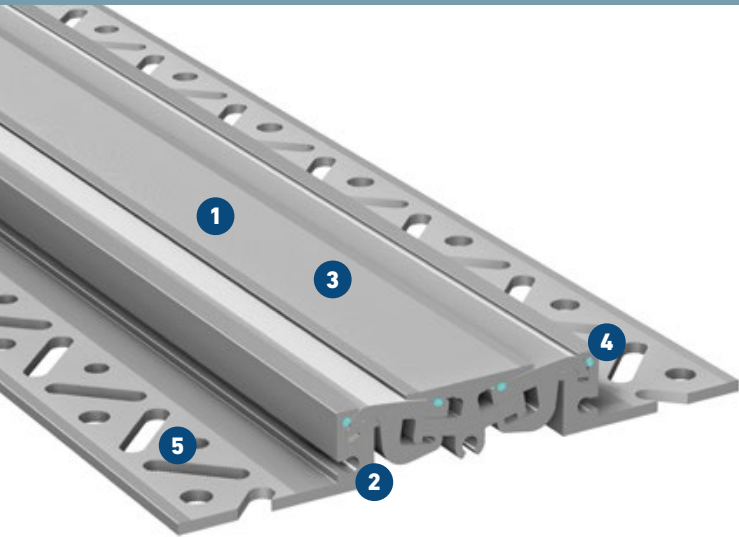


# FSX 105

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 New, improved design**  
Innovative layout of the line
- 2 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system with optimized movement control**  
absorbs movement in 3 directions, with improved shock absorbing elements
- 5 Punctured leg with MIGUA mounting matrix®**  
Provides optimal anchoring alternatives in the underground

### Now available Anodized!

For perfect match with interior design. Different colours can be combined. Color-fast and light resistant.

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	[kN]	[kN]	solid plastic tyres [kg/mm]
FSX 105/22*	75	20 ( $\pm 10$ )	105	226	22	600	150	15
FSX 105/30	75	20 ( $\pm 10$ )	105	226	30	600	150	15
FSX 105/50	75	20 ( $\pm 10$ )	105	226	50	600	150	15

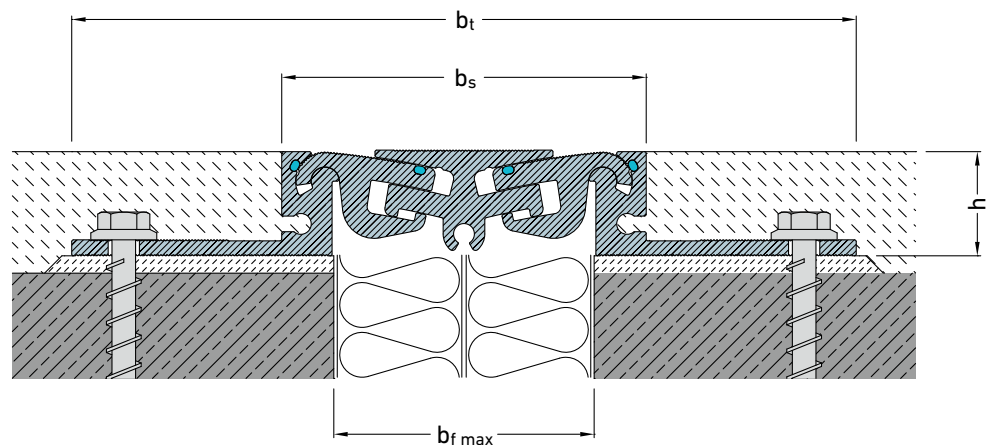
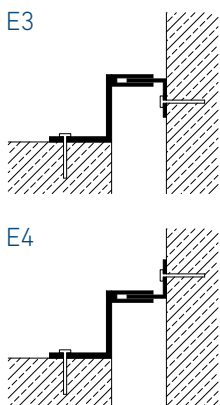
\* Minimum joint width 75 mm

**Production length:** 4 m

**Standard colour:** Aluminium

Further installation heights on request.

Corner versions:

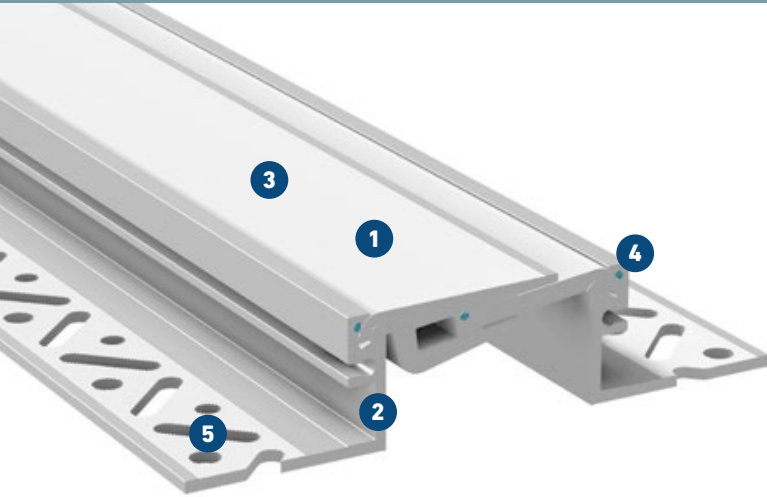


# FSX 110

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 New, improved design**  
Innovative layout of the line
- 2 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system with optimized movement control**  
absorbs movement in 3 directions, with improved shock absorbing elements
- 5 Punctured leg with MIGUA mounting matrix®**  
Provides optimal anchoring alternatives in the underground

### Now available Anodized!

For perfect match with interior design. Different colours can be combined. Color-fast and light resistant.

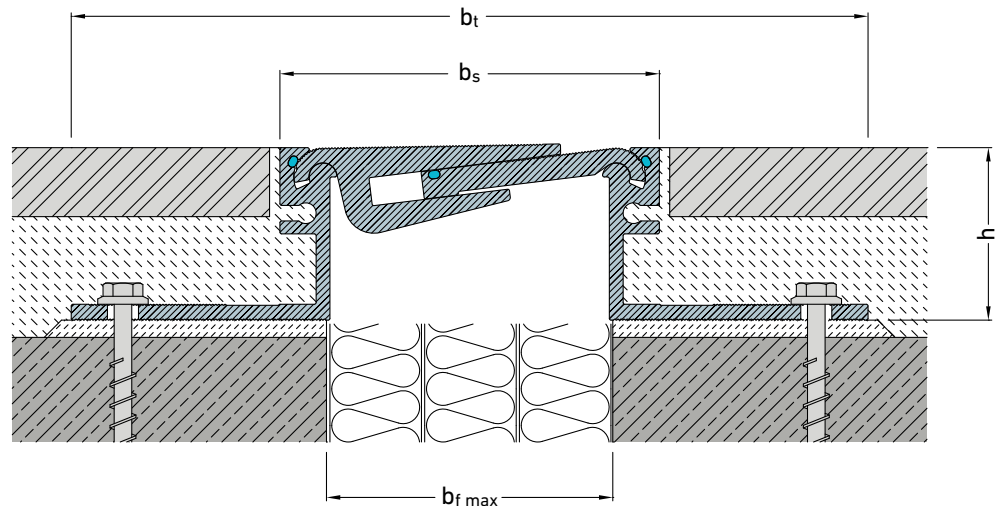
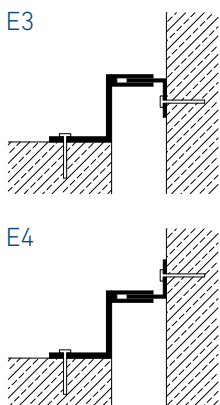
Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	[kN]	[kN]	solid plastic tyres [kg/mm]
FSX 110/22 *	75	30 (±15)	110	231	22	300	130	10
FSX 110/30	75	30 (±15)	110	231	30	300	130	10
FSX 110/40	75	30 (±15)	110	231	40	300	130	10
FSX 110/50	75	30 (±15)	110	231	50	300	130	10
FSX 110/60	75	30 (±15)	110	231	60	300	130	10
FSX 110/80	75	30 (±15)	110	231	80	300	130	10
FSX 110/100	75	30 (±15)	110	231	100	300	130	10

\* Minimum joint width 75 mm

**Production length:** 4 m

**Standard colour:** Aluminium, available in anodized version, too  
Further installation heights on request.

Corner versions:





# FS 110 ES



FOR FLOOR SURFACES WITH HIGH DEMANDS ON DESIGN AND APPEARANCE

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



- 1** **Stainless Steel, brass or 3M tape surface**  
for highest demands and skid resistance (R9 - R13)
- 2** **Visible surface has no gaps**  
avoids dirt accumulation
- 3** **Articulated telescoping system**  
absorbs movement in 3 directions
- 4** **Solid all-metal expansion joint**  
hard wearing, maintenance free, long lasting
- 5** **Optically attractive, high quality surface**

Expansion joint cover	Joint width max.	Total movement		Visible width	Total width	Joint height	Load bearing capacity  [kN]	Load bearing capacity  [kN]
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]			
FS 110/22 ES *	75	30 ( $\pm 15$ )	113	226	23	300	70	
FS 110/30 ES	75	30 ( $\pm 15$ )	113	226	31	300	70	
FS 110/42 ES	75	30 ( $\pm 15$ )	113	230	43	300	70	
FS 110/52 ES	75	30 ( $\pm 15$ )	113	230	53	300	70	
FS 110/62 ES	75	30 ( $\pm 15$ )	113	230	63	300	70	
FS 110/77 ES	75	30 ( $\pm 15$ )	113	230	78	300	70	
FS 110/87 ES	75	30 ( $\pm 15$ )	113	230	88	300	70	
FS 110/97 ES	75	30 ( $\pm 15$ )	113	230	98	300	70	

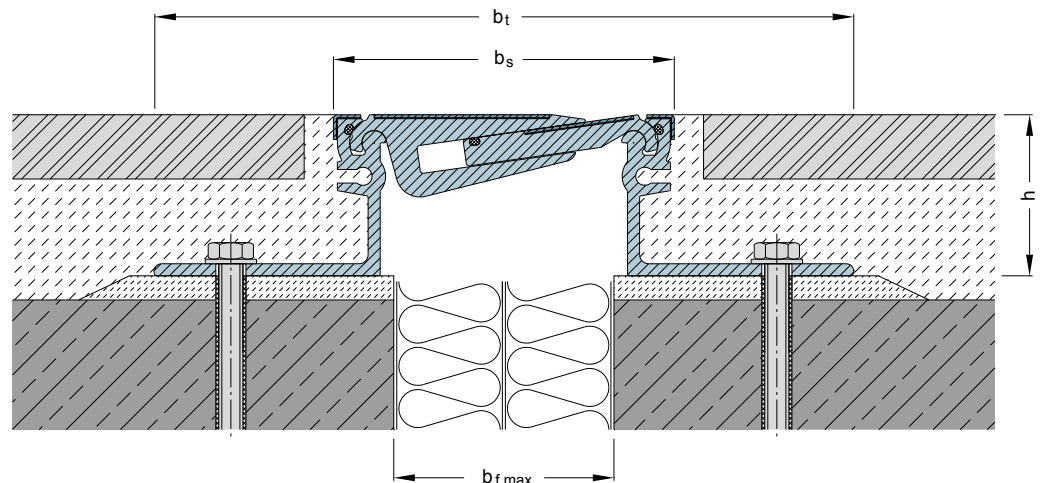
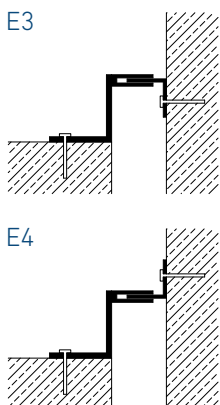
\* Minimum joint width 75 mm

**Production length:** 4 m, metal inserts: 2 x 2 m

**Standard colour:** Aluminium, inserts: stainless steel, brass or black

Larger installation heights on request. Also available with different inserts.

Corner versions:

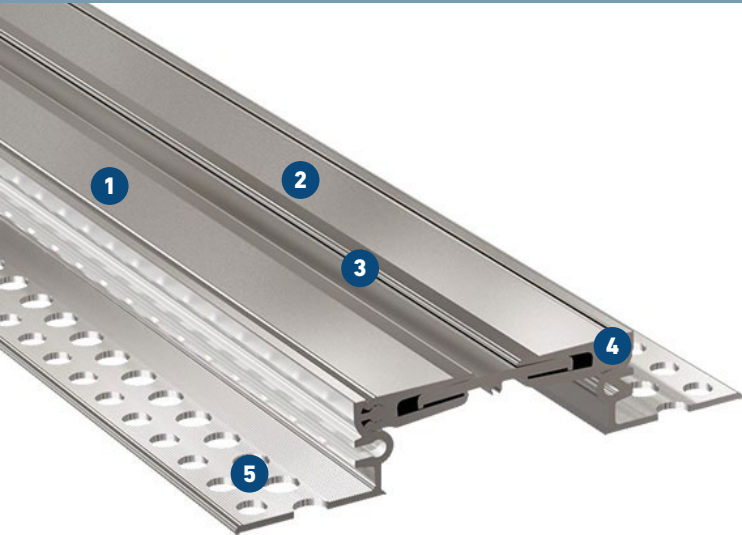


# FSL 113


FOR FLOORS WITH LARGE MOVEMENT – TO BE USED BY LIGHT FORK LIFT TRUCKS AND PALLET TRUCKS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



- 1 Solid all-metal expansion joint cover**  
hard wearing, maintenance-free, long lasting
- 2 Striated surface**  
ensures good skid resistance
- 3 Symmetrical visible surface without gaps**  
prevents accumulation of dirt
- 4 Articulated telescoping system**  
absorbs movement in 3 directions
- 5 MultiHole mounting bracket**  
for secure fixing

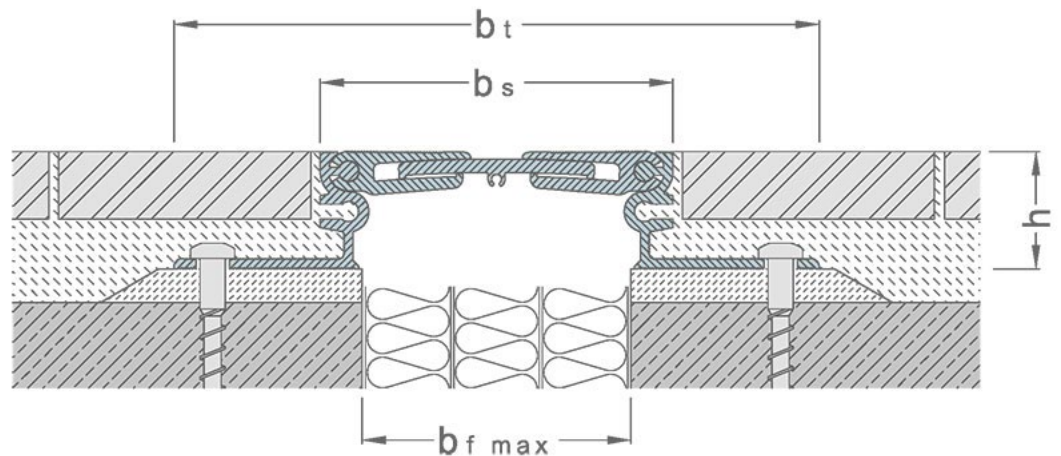
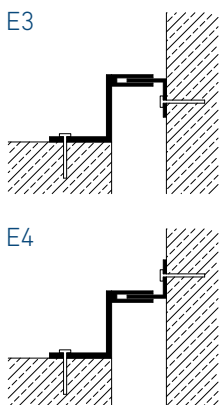
Expansion joint cover	Joint width max.	Total movement		Visible width	Total width	Joint height	Load bearing capacity  [kN]
	$b_f$ [mm]	$\Delta b_f$ [mm]		$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	
FSL 113/20	90	45 ( $\pm 22,5$ )		113	200	20	12
FSL 113/35	90	45 ( $\pm 22,5$ )		113	200	35	12
FSL 113/50	90	45 ( $\pm 22,5$ )		113	200	50	12
FSL 113/90	90	45 ( $\pm 22,5$ )		113	200	90	12

**Production length:** 4 m

**Standard colour:** Aluminium

Larger installation heights on request.

Corner versions:

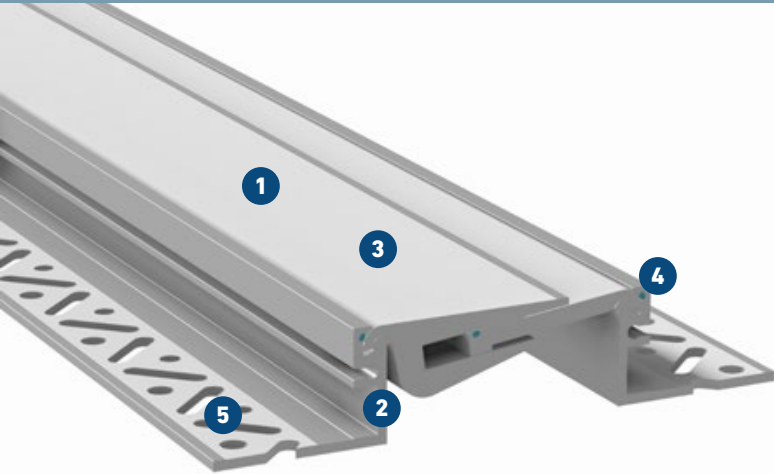


# FSX 130

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 New, improved design**  
Innovative layout of the line
- 2 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system with optimized movement control**  
absorbs movement in 3 directions, with improved shock absorbing elements
- 5 Punctured leg with MIGUA mounting matrix®**  
Provides optimal anchoring alternatives in the underground

### Now available Anodized!

For perfect match with interior design. Different colours can be combined. Color-fast and light resistant.

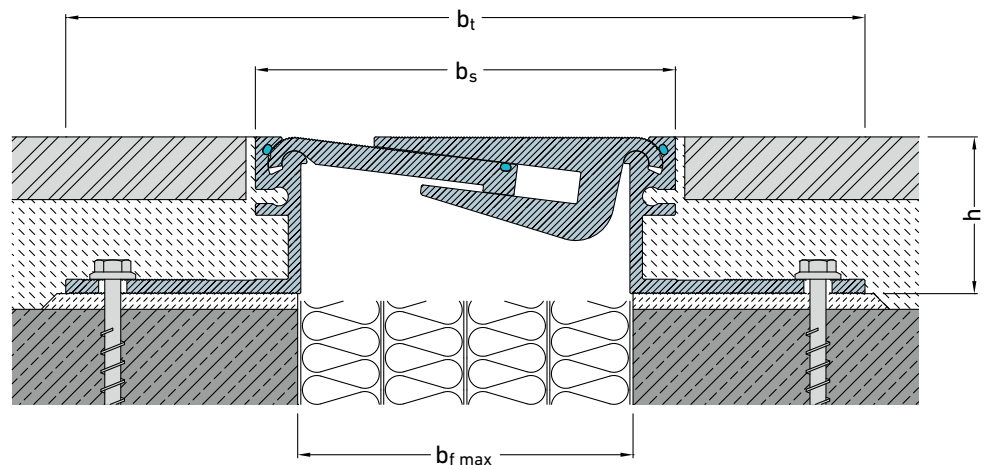
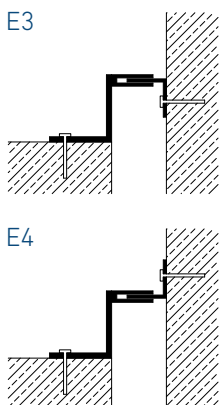
Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	[kN]	[kN]	solid plastic tyres [kg/mm]
FSX 130/22 *	100	40 (±20)	134	255	22	300	130	10
FSX 130/30 *	100	40 (±20)	134	255	30	300	130	10
FSX 130/40	100	40 (±20)	134	255	40	300	130	10
FSX 130/50	100	40 (±20)	134	255	50	300	130	10
FSX 130/60	100	40 (±20)	134	255	60	300	130	10
FSX 130/80	100	40 (±20)	134	255	80	300	130	10
FSX 130/100	100	40 (±20)	134	255	100	300	130	10

\* Minimum joint width 100 mm

**Production length:** 4 m

**Standard colour:** Aluminium, available in anodized version, too  
Further installation heights on request.

Corner versions:



# FS 135 / FS 174

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



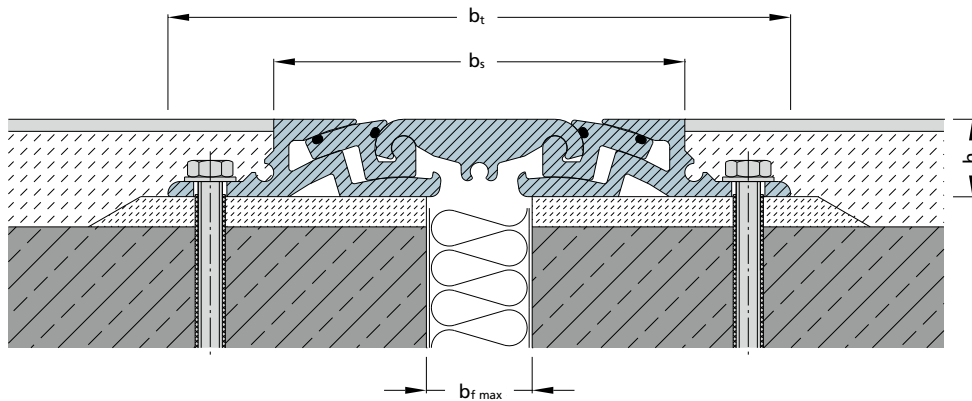
- 1** **Symmetrical visible surface has no gaps**  
avoids dirt accumulation, fast cleaning
- 2** **Striated surface**  
ensures good skid resistance
- 3** **Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 4** **Extremely flat 25 mm**
- 5** **Articulated telescoping system**  
absorbs movement in 3 directions

Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
FS 135/25	35	20 ( $\pm 10$ )	135	206	25	600	250	30
FS 174/25	70	20 ( $\pm 10$ )	174	245	25	600	130	15

**Production length:** 4 m

**Standard colour:** Aluminium

We recommend installation using epoxy adhesive

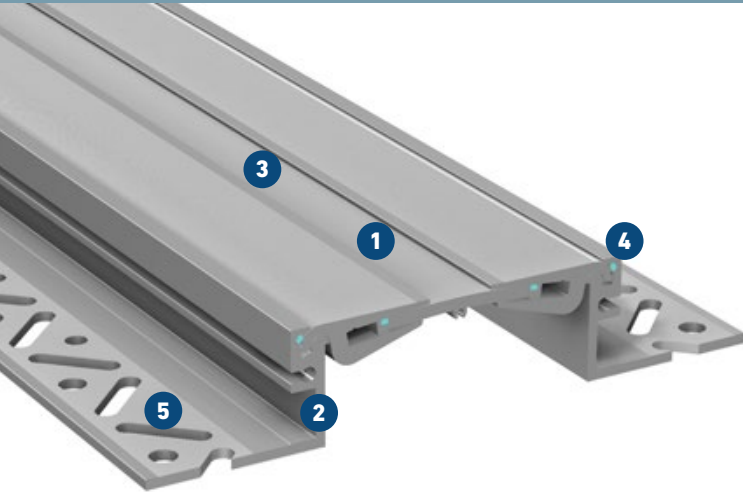


# FSX 146

FOR HEAVY DUTY FLOORS

# MIGUTRANS



HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 New, improved design**  
Innovative layout of the line
- 2 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system with optimized movement control**  
absorbs movement in 3 directions, with improved shock absorbing elements
- 5 Punctured leg with MIGUA mounting matrix®**  
Provides optimal anchoring alternatives in the underground

### Now available Anodized!

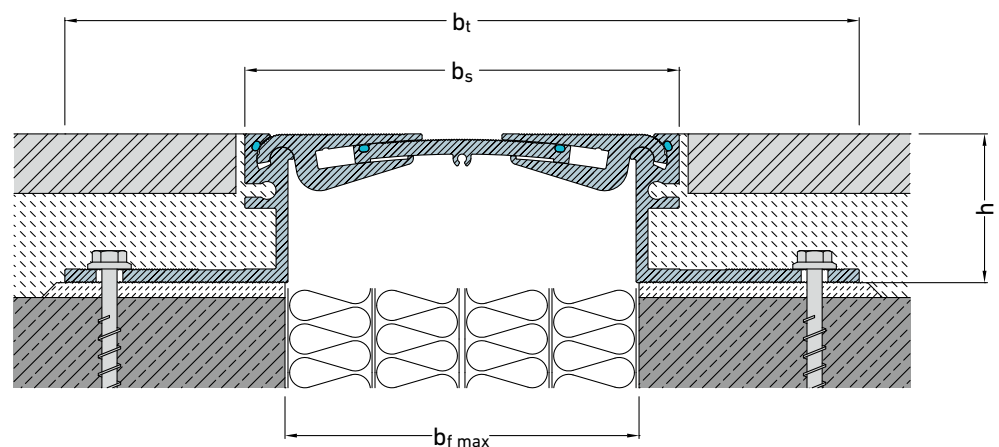
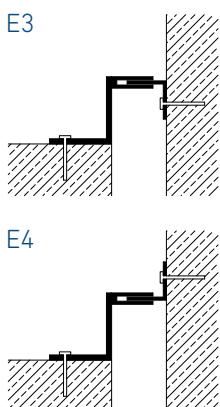
For perfect match with interior design. Different colours can be combined. Color-fast and light resistant.

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	 <b>DIN 1072</b> [kN]	 <b>solid plastic tyres</b> [kg/mm]
FSX 146/22	117	50 (±25)	146	267	22	30	3,5
FSX 146/30	117	50 (±25)	146	267	30	30	3,5
FSX 146/40	117	50 (±25)	146	267	40	30	3,5
FSX 146/50	117	50 (±25)	146	267	50	30	3,5
FSX 146/60	117	50 (±25)	146	267	60	30	3,5
FSX 146/80	117	50 (±25)	146	267	80	30	3,5
FSX 146/100	117	50 (±25)	146	267	100	30	3,5

**Production length:** 4 m

**Standard colour:** Aluminium, available in anodized version, too  
Further installation heights on request.

Corner versions:



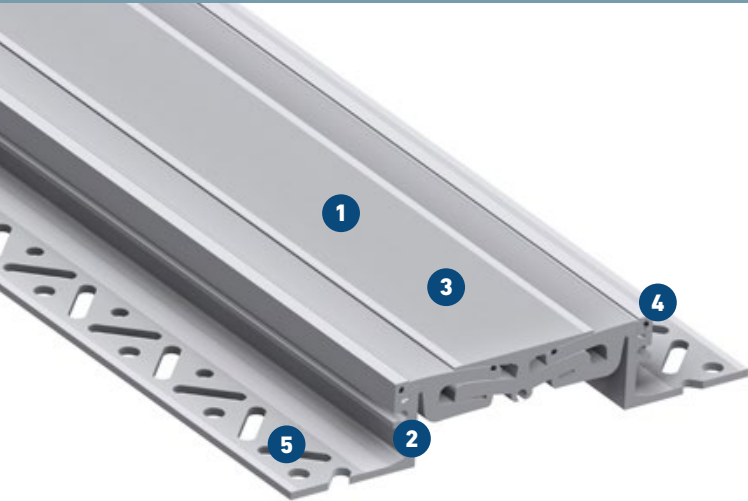


# FSX 155

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 New, improved design**  
Innovative layout of the line
- 2 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system with optimized movement control**  
absorbs movement in 3 directions, with improved shock absorbing elements
- 5 Punctured leg with MIGUA mounting matrix®**  
Provides optimal anchoring alternatives in the underground

### Now available Anodized!

For perfect match with interior design. Different colours can be combined. Color-fast and light resistant.

Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
FSX 155/22 *	120	40 ( $\pm 20$ )	156	227	22	600	130	15
FSX 155/30	120	40 ( $\pm 20$ )	156	227	30	600	130	15
FSX 155/50	120	40 ( $\pm 20$ )	156	227	50	600	130	15

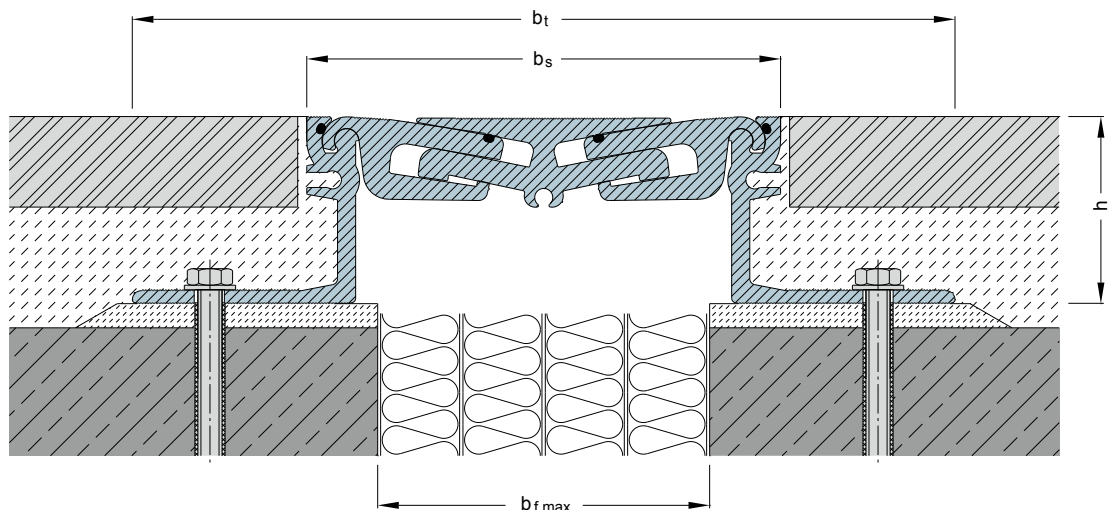
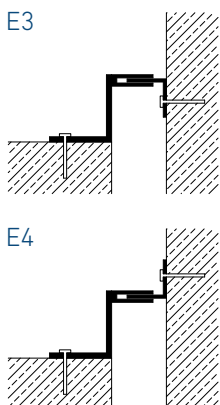
\* Minimum joint width 120 mm

**Production length:** 4 m

**Standard colour:** Aluminium

Larger installation heights on request.

Corner versions:

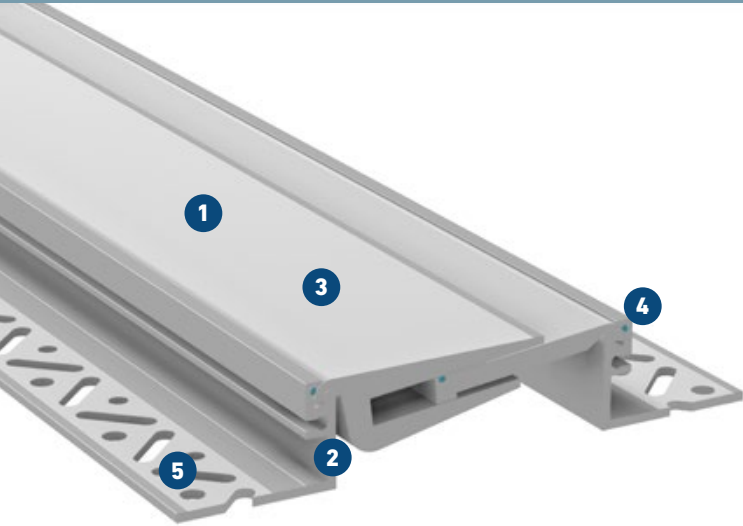


# FSX 160

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 New, improved design**  
Innovative layout of the line
- 2 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system with optimized movement control**  
absorbs movement in 3 directions, with improved shock absorbing elements
- 5 Punctured leg with MIGUA mounting matrix®**  
Provides optimal anchoring alternatives in the underground

### Now available Anodized!

For perfect match with interior design. Different colours can be combined. Color-fast and light resistant.

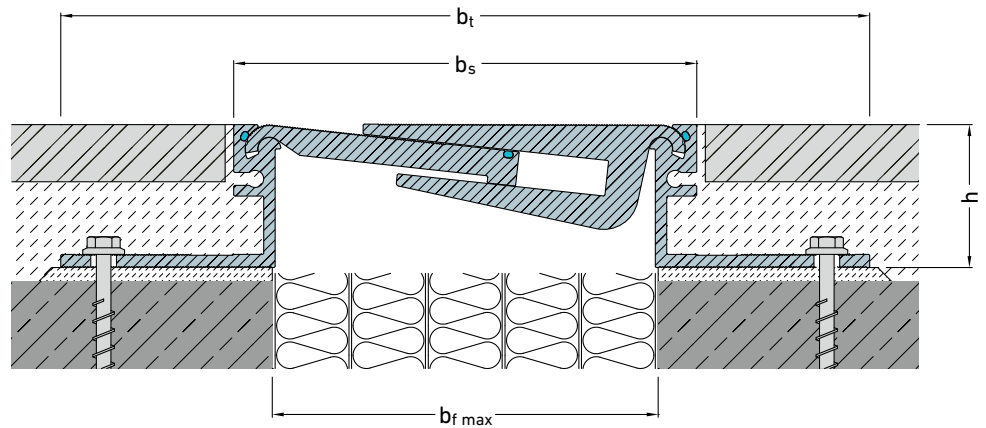
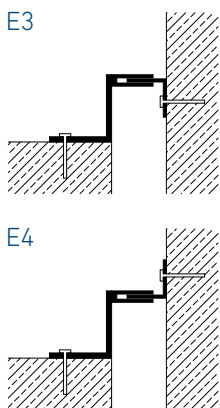
Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	[kN]	[kN]	solid plastic tyres [kg/mm]
FSX 160/22 *	130	60 (±30)	162	283	22	300	100	10
FSX 160/30 *	130	60 (±30)	162	283	30	300	100	10
FSX 160/40	130	60 (±30)	162	283	40	300	100	10
FSX 160/50	130	60 (±30)	162	283	50	300	100	10
FSX 160/60	130	60 (±30)	162	283	60	300	100	10
FSX 160/80	130	60 (±30)	162	283	80	300	100	10
FSX 160/100	130	60 (±30)	162	283	100	300	100	10

\* Minimum joint width 130 mm

**Production length:** 4 m

**Standard colour:** Aluminium, available in anodized version, too  
Further installation heights on request.

Corner versions:

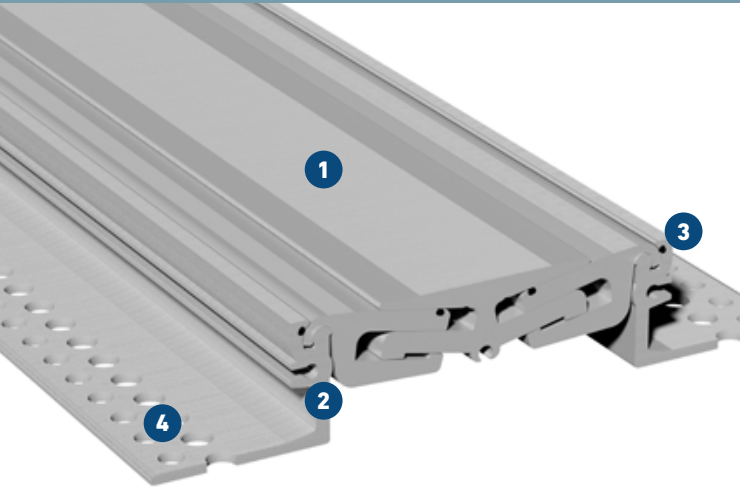


# FS 167

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1** Symmetrical visible surface has no gaps  
avoids dirt accumulation
- 2** Solid all-metal expansion joint  
hard wearing, maintenance-free, long lasting
- 3** Articulated telescoping system  
absorbs movement in 3 directions
- 4** MultiHole mounting bracket  
for secure fixing

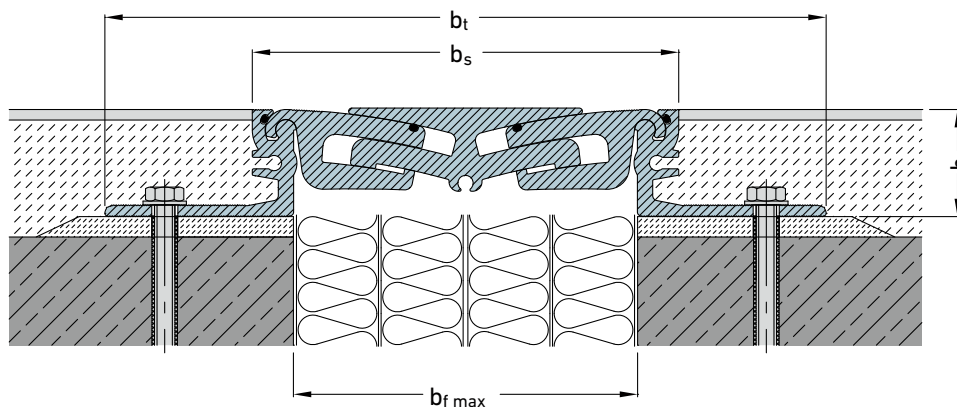
Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]			
FS 167/30	135	45 ( $\pm 22,5$ )	167	283	30	600	130	20
FS 167/42	135	45 ( $\pm 22,5$ )	167	283	42	600	130	20
FS 167/52	135	45 ( $\pm 22,5$ )	167	283	52	600	130	15
FS 167/62	135	45 ( $\pm 22,5$ )	167	283	62	600	130	15

**Production length:** 4 m

**Standard colour:** Aluminium

Further installation heights on request.

Required fixing distance FS 167/30: 300 mm; FS 167/42, FS 167/52 and FS 167/62

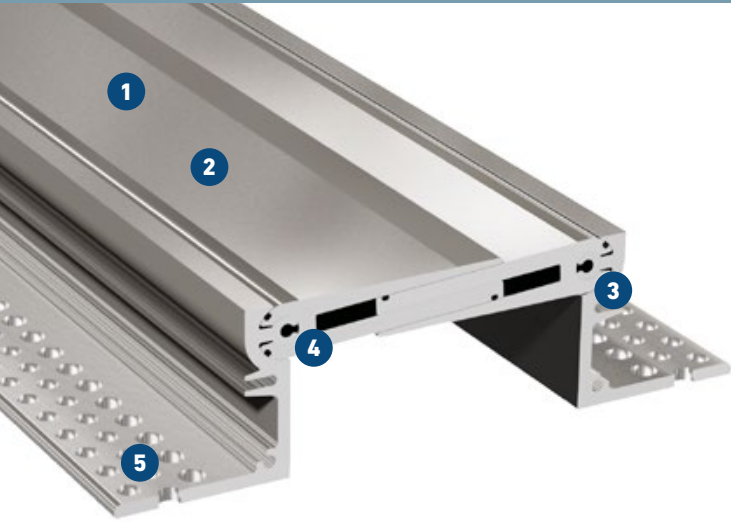


# FS 185

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1** **Visible surface has no gaps**  
avoids dirt accumulation
- 2** **Striated surface**  
ensures good skid resistance
- 3** **Extremely flat (27 mm)**  
ideal for redevelopment, refurbishment, renovation
- 4** **Articulated telescoping system**  
absorbs movement in 3 directions
- 5** **Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting

**MultiHole mounting bracket**  
for secure fixing

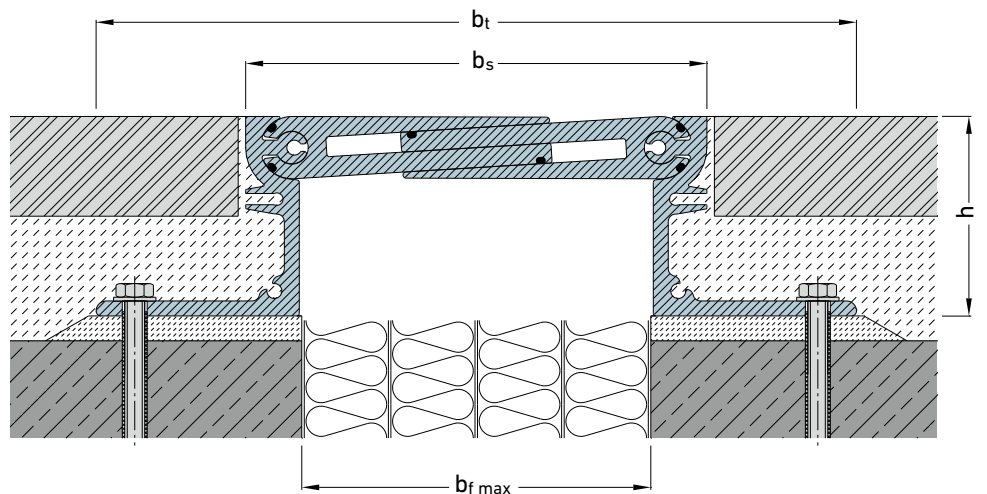
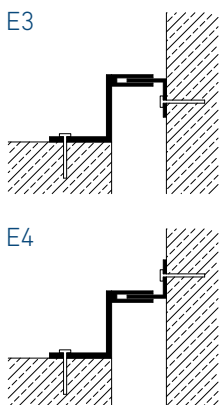
Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
FS 185/27	140	60 (±30)	185	305	27	300	70	6,5
FS 185/40	140	60 (±30)	185	305	40	300	70	6,5
FS 185/80	140	60 (±30)	185	305	80	300	70	6,5

**Production length:** 3 m

**Standard colour:** Aluminium

Larger installation heights on request.

Corner versions:



# FSV 235


FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS

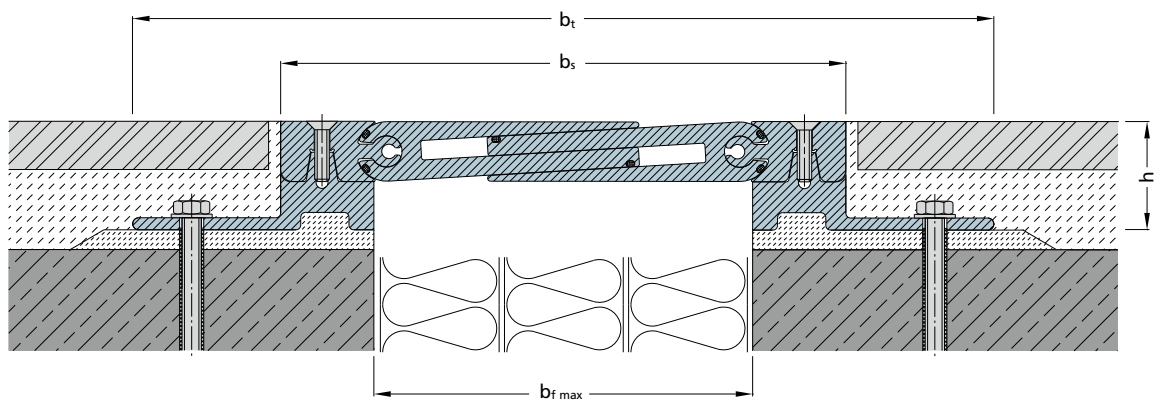
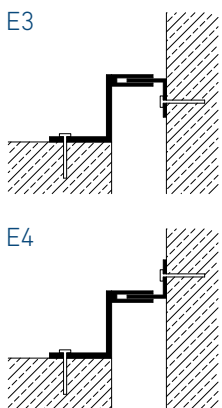


- 1 Visible surface has no gaps**  
avoids dirt accumulation
- 2 Removable bridging unit**  
serviceable for inspection, replaceable centre parts
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system**  
absorbs movement in 3 directions
- 5 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity 
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	
FSV 235/45	150	60 (±30)	235	357	45	300
FSV 235/80	150	60 (±30)	235	357	80	300
FSV 235/130	150	60 (±30)	235	357	130	300

**Production length:** 3 m  
**Standard colour:** Aluminium  
Alternative heights on request.

Corner versions:



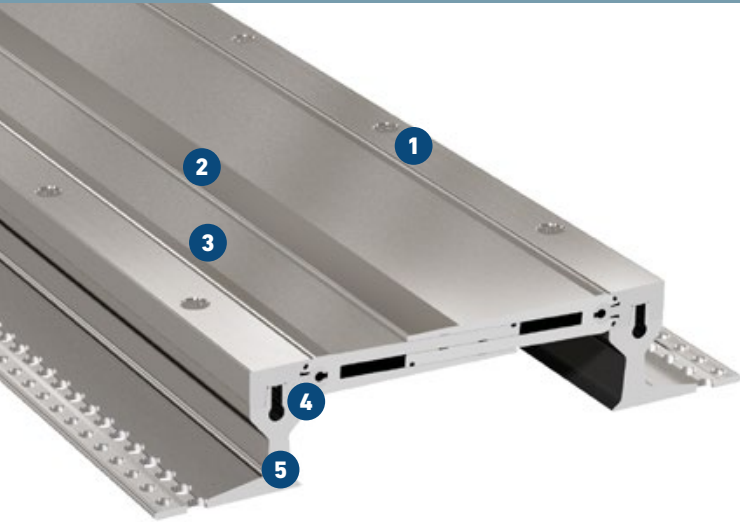


# FSV 280

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 Removable bridging unit**  
serviceable for inspection, replaceable centre parts
- 2 Visible surface has no gaps**  
avoids dirt accumulation
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system**  
absorbs movement in 3 directions
- 5 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting

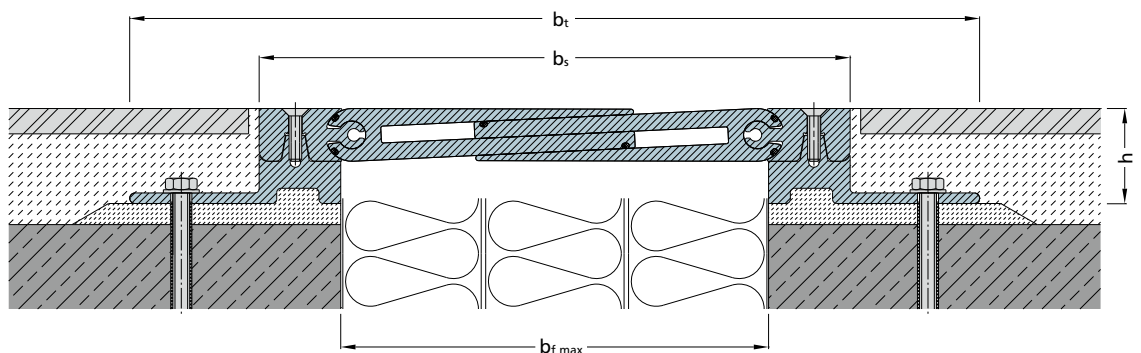
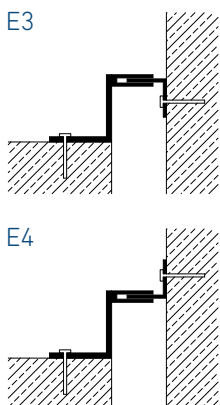
Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity		Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	[kN]	[kN]	solid plastic tyres [kg/mm]
FSV 280/45	200	85 ( $\pm 42.5$ )	280	403	45	35	35	6,5
FSV 280/80	200	85 ( $\pm 42.5$ )	280	403	80	35	35	6,5
FSV 280/130	200	85 ( $\pm 42.5$ )	280	403	130	35	35	6,5

**Production length:** 3 m

**Standard colour:** Aluminium

Larger installation heights on request.

Corner versions:



# FSV 285


FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 2 Symmetrical visible surface has no gaps**  
avoids dirt accumulation
- 3 Extremely flat (27 mm)**  
ideal for redevelopment
- 4 MultiHole mounting bracket**  
for secure fixing
- 5 Articulated telescoping system**  
absorbs movement in 3 directions

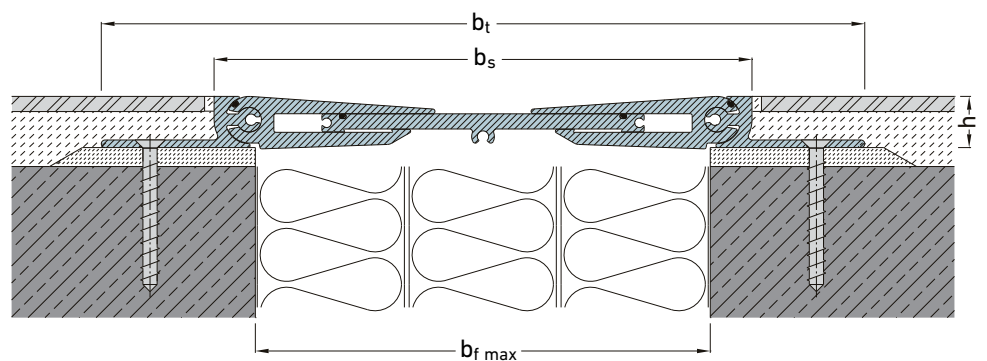
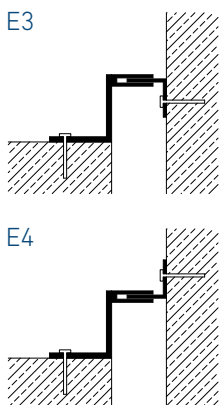
Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]
FSV 285/27	240	100 ( $\pm 50$ )	284	404	27	35
FSV 285/40	240	100 ( $\pm 50$ )	284	404	40	35
FSV 285/80	240	100 ( $\pm 50$ )	284	404	80	35

**Production length:** 3 m

**Standard colour:** Aluminium

Larger installation heights on request.

Corner versions:

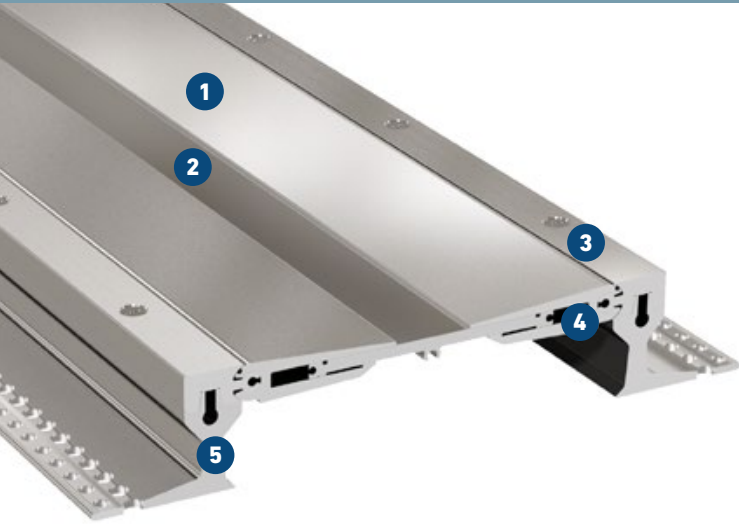


# FSV 335


FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



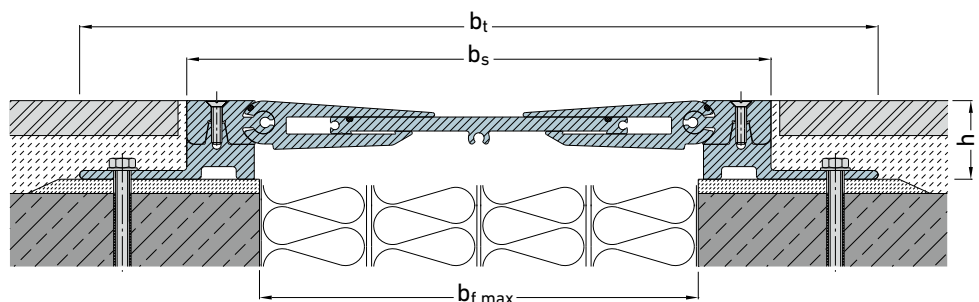
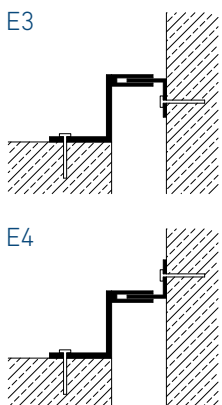
- 1 Striated surface**  
ensures good skid resistance
- 2 Symmetrical visible surface has no gaps**  
avoids dirt accumulation
- 3 Removable bridging unit**  
serviceable for inspection, replaceable centre parts
- 4 Articulated telescoping system**  
absorbs movement in 3 directions
- 5 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity 
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	
FSV 335/45	250	100 (±50)	335	457	45	35
FSV 335/80	250	100 (±50)	335	457	80	35
FSV 335/130	250	100 (±50)	335	457	130	35

**Production length:** 3 m

**Standard colour:** Aluminium

Corner versions:

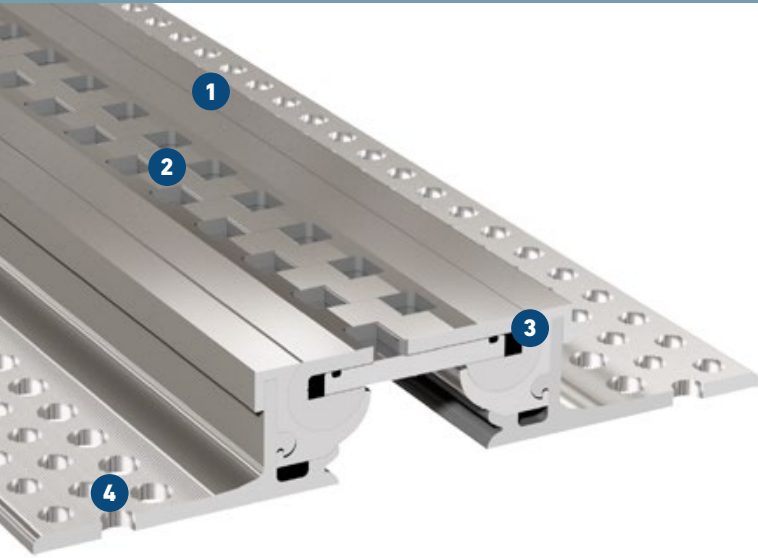


# FS 100

HEAVY DUTY EXPANSION JOINT FOR TRANSPORT FREE FROM VIBRATION

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS

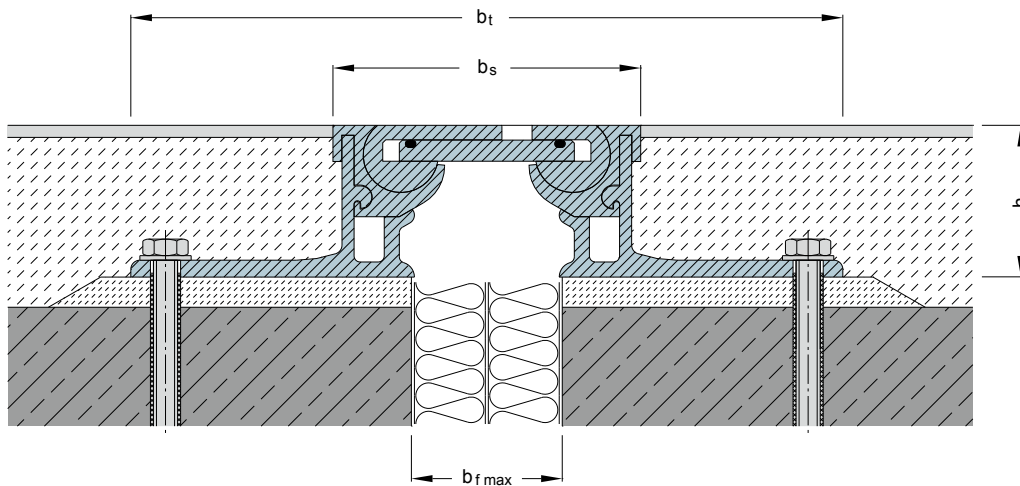


- 1 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 2 Transportation free from vibration**  
suitable for transport of sensitive goods
- 3 Articulated telescoping system**  
absorbs movement in 3 directions
- 4 MultiHole mounting bracket**  
for secure fixing

**Official test certificate on load capacity available**

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	[kN]	[kN]	solid plastic tyres [kg/mm]
FS 100/30	50	20 ( $\pm 10$ )	102	236	30	300	75	9
FS 100/40	50	20 ( $\pm 10$ )	102	236	40	300	75	9
FS 100/50	50	20 ( $\pm 10$ )	102	236	50	300	75	9

**Production length:** 4 m  
**Standard colour:** Aluminium

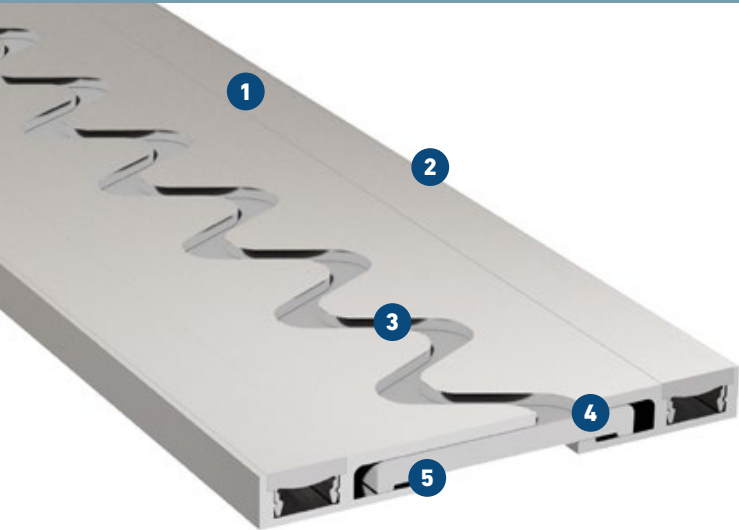


# FSS 215

HEAVY DUTY EXPANSION JOINT FOR TRANSPORT FREE FROM VIBRATION

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



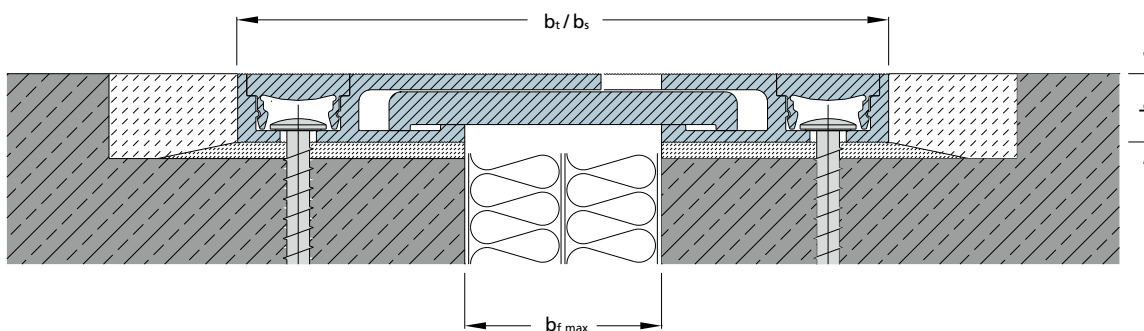
- 1 Innovative aluminium alloy**  
for highest load capacity
- 2 Extremely flat 23 mm, fixing without arms**  
Time and cost saving installation, ideal for redevelopment
- 3 Transportation free from vibration from a wheel width of 100 mm**  
suitable for transport of sensitive goods
- 4 Absorbs horizontal movement (transverse and parallel)**  
not suitable for vertical movement
- 5 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting

Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
FSS 215/23	60	40 ( $\pm 20$ )	215	215	23	600	130	30

**Production length:** 3 m

**Standard colour:** Aluminium

We recommend fixing with galvanized Multi-Monti Screws MMS P 10 x 70 mm (available ex stock).

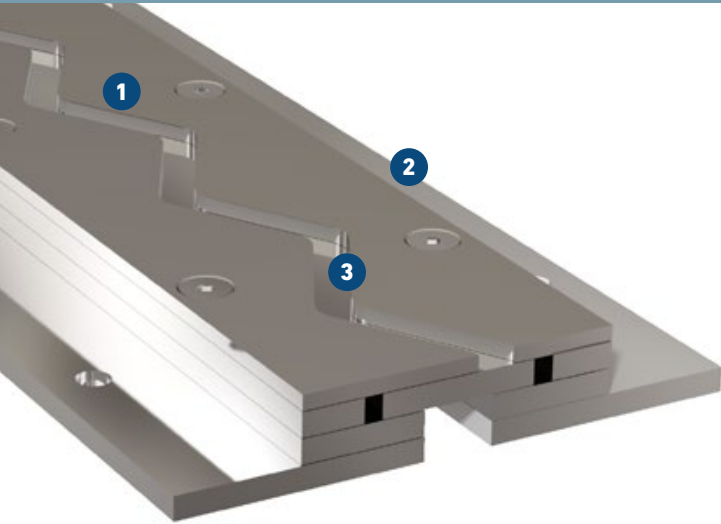


# STS 100

FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 Steel-/Stainless steel-Combination**  
for highest load capacity by pallet trucks, fork lift trucks, heavy lorries, special vehicles, etc.
- 2 Transportation free from vibration from a wheel width of 100 mm**  
suitable for transport of sensitive goods
- 3 Absorbs horizontal movement (transverse and parallel)**  
Not suitable for vertical movement

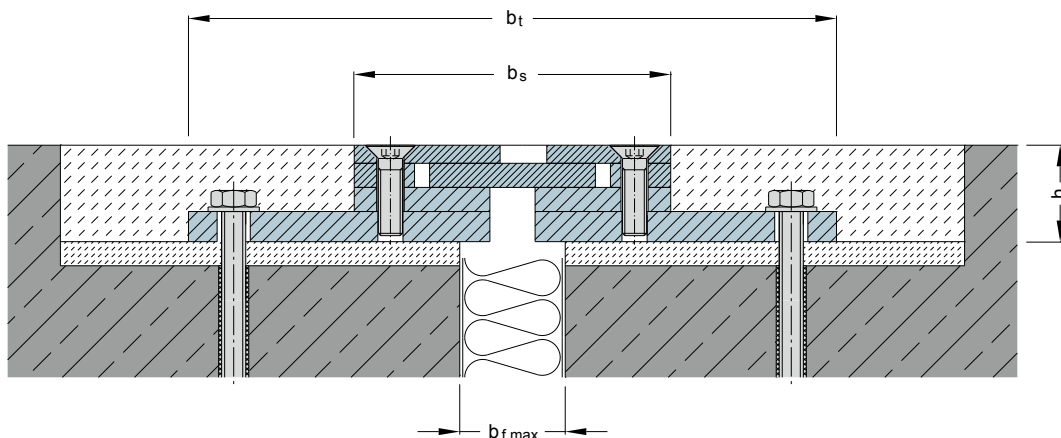
Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
STS 100/30 ES	35	20 ( $\pm 10$ )	102	182	29	600	150	75
STS 100/50 ES	35	20 ( $\pm 10$ )	102	182	49	600	150	75
STS 100/60 ES	35	20 ( $\pm 10$ )	102	182	59	600	150	75

**Production length:** 1,96 m

**Material - Visible surface:** stainless steel 304 or 316Ti **Underlying construction:** black steel, galvanized steel or stainless steel (please specify while ordering).

Larger joint width or movement capacity or special heights on request.

**Mounting distance:** 300 mm





# STS 160




FOR HEAVY DUTY FLOORS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 Steel-/Stainless steel-Combination**  
for highest load capacity by pallet trucks, fork lift trucks, heavy lorries, special vehicles, etc.
- 2 Transportation free from vibration from a wheel width of 100 mm**  
suitable for transport of sensitive goods
- 3 Absorbs horizontal movement (transverse and parallel)**  
Not suitable for vertical movement

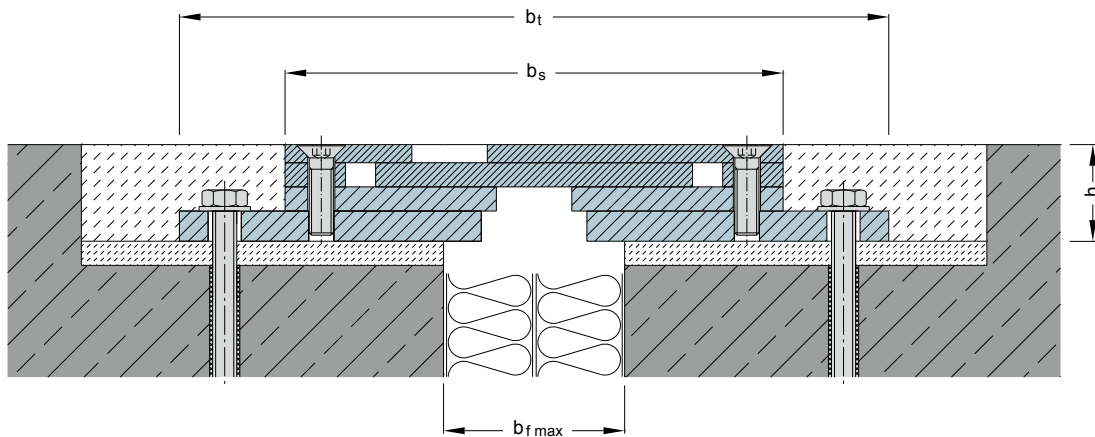
Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]			
STS 160/30 ES	60	40 ( $\pm 20$ )	163	233	29	600	150	75
STS 160/45 ES	60	40 ( $\pm 20$ )	163	233	44	600	150	75
STS 160/60 ES	60	40 ( $\pm 20$ )	163	233	59	600	150	75

**Production length:** 1,96 m

**Material - Visible surface:** stainless steel 304 or 316Ti **Underlying construction:** black steel, galvanized steel or stainless steel (please specify while ordering).

Larger joint width or movement capacity or special heights on request.

**Mounting distance:** 300 mm

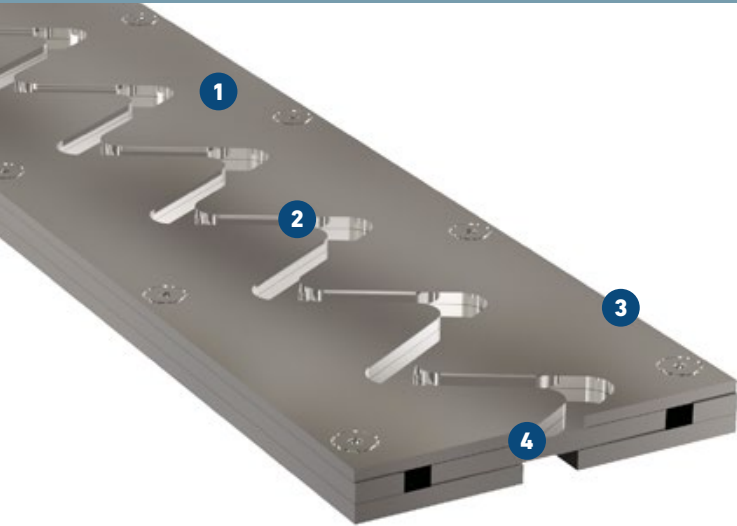


# STS 160/16 / STS 160/22

FOR HEAVY DUTY FLOORS WITH SMALLER INSTALLATION HEIGHTS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



- 1 Steel-/Stainless steel-Combination**  
for highest load capacity by pallet trucks, fork lift trucks, heavy lorries, special vehicles, etc.
- 2 Transportation free from vibration from a wheel width of 100 mm**  
suitable for transport of sensitive goods
- 3 Extremely flat (16 mm), fixing without arms**  
Time and cost saving installation, ideal for redevelopment
- 4 Absorbs horizontal movement (transverse and parallel)**  
Not suitable for vertical movement

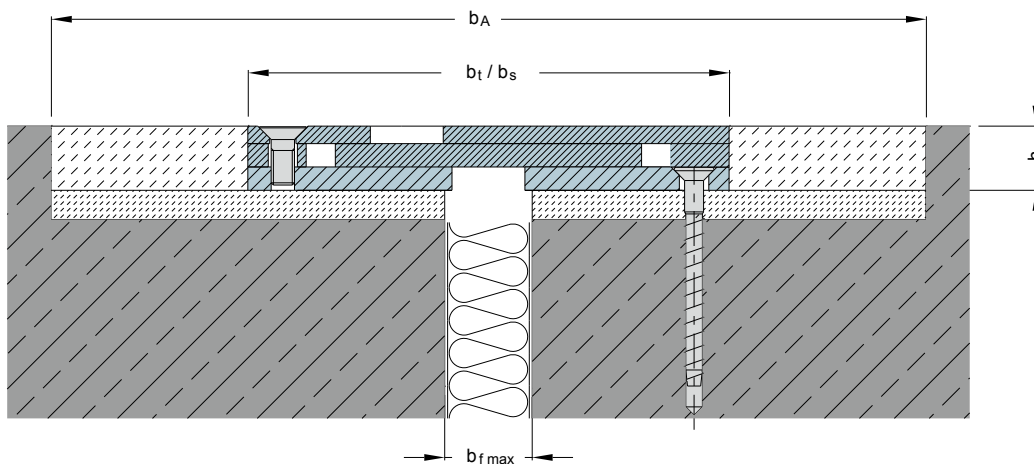
Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity [kN]	Load bearing capacity [kN]	Load bearing capacity solid plastic tyres [kg/mm]
STS 160/16 ES	30	40 ( $\pm 20$ )	163	163	16	600	150	75
STS 160/22 ES	30	40 ( $\pm 20$ )	163	163	21	600	150	75

**Production length:** 1,96 m

**Material - Visible surface:** stainless steel 304 or 316Ti **Underlying construction:** black steel, galvanized steel or stainless steel (please specify while ordering).

Larger joint width or movement capacity or special heights on request.

**Mounting distance:** 300 mm

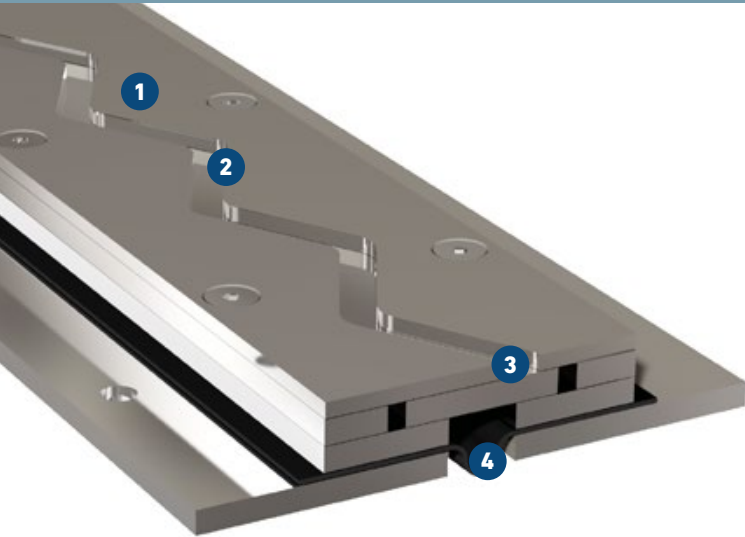


# STW 100

WATERTIGHT HEAVY DUTY PROFILE FOR TRANSPORT FREE FROM VIBRATION

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



- 1 Steel-/Stainless steel-Combination**  
for highest load capacity by pallet trucks, fork lift trucks, heavy lorries, special vehicles, etc.
- 2 Transportation free from vibration from a wheel width of 100 mm**  
suitable for transport of sensitive goods
- 3 Absorbs horizontal movement (transverse and parallel)**  
Not suitable for vertical movement
- 4 Additional sealing layer**  
Watertight in connection with connection joint

Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
STW 100/30 ES	35	20 ( $\pm 10$ )	102	182	31	600	150	75
STW 100/50 ES	35	20 ( $\pm 10$ )	102	182	51	600	150	75
STW 100/60 ES	35	20 ( $\pm 10$ )	102	182	61	600	150	75

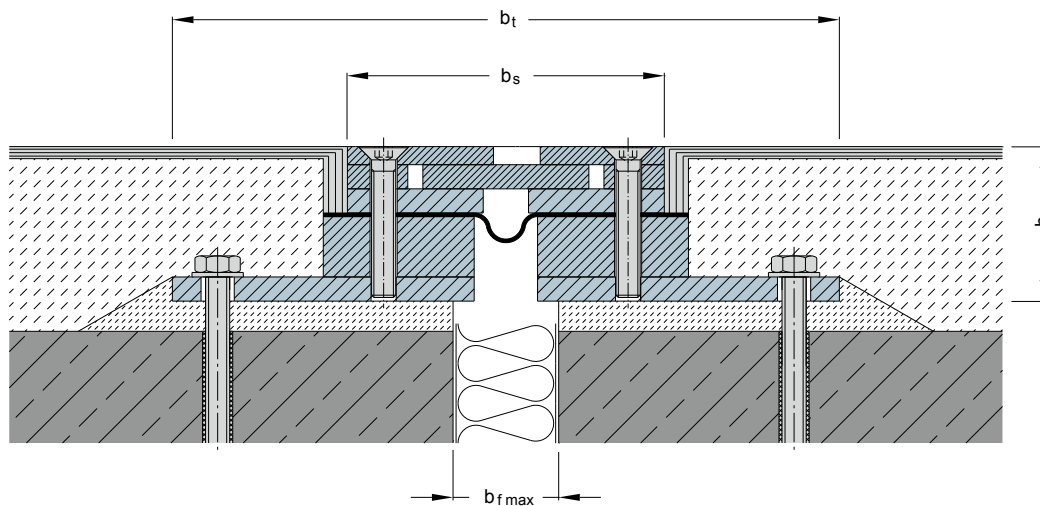
**Production length:** 1,96 m

**Sealing layer:** Wolfin IB

**Material - Visible surface:** stainless steel 304 or 316Ti **Underlying construction:** black steel, galvanized steel or stainless steel (please specify while ordering).

Larger joint width or movement capacity or special heights on request.

**Mounting distance:** 300 mm

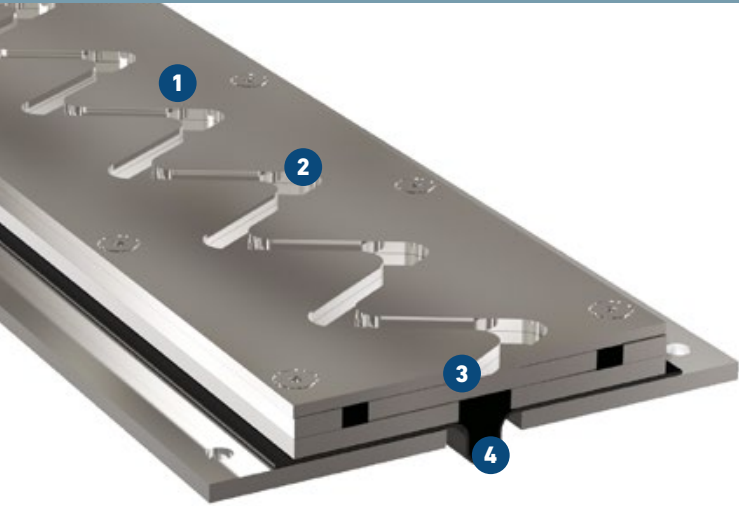


# STW 160

WATERTIGHT HEAVY DUTY PROFILE FOR TRANSPORT FREE FROM VIBRATION

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



- 1 Steel-/Stainless steel-Combination**  
for highest load capacity by pallet trucks, fork lift trucks, heavy lorries, special vehicles, etc.
- 2 Transportation free from vibration from a wheel width of 100 mm**  
suitable for transport of sensitive goods
- 3 Absorbs horizontal movement (transverse and parallel)**  
Not suitable for vertical movement
- 4 Additional sealing layer**  
Watertight in connection with connection joint

Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
STW 160/30 ES	60	40 ( $\pm 20$ )	163	233	31	600	150	75
STW 160/45 ES	60	40 ( $\pm 20$ )	163	233	46	600	150	75
STW 160/60 ES	60	40 ( $\pm 20$ )	163	233	61	600	150	75

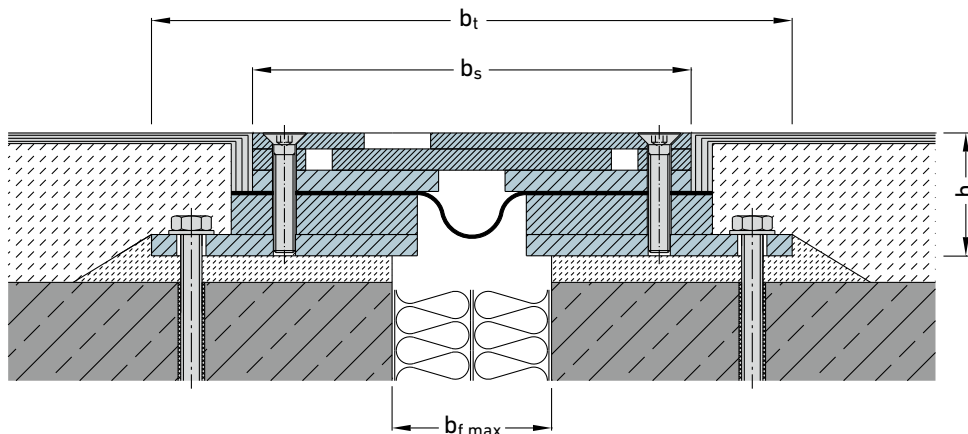
**Production length:** 1,96 m

**Sealing layer:** Wolfin IB

**Material - Visible surface:** stainless steel 304 or 316Ti **Underlying construction:** black steel, galvanized steel or stainless steel (please specify while ordering).

Larger joint width or movement capacity or special heights on request.

**Mounting distance:** 300 mm



# FS 220 / FS 260 / FS 380

FOR FLOORS WITH SMALL INSTALLATION HEIGHTS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



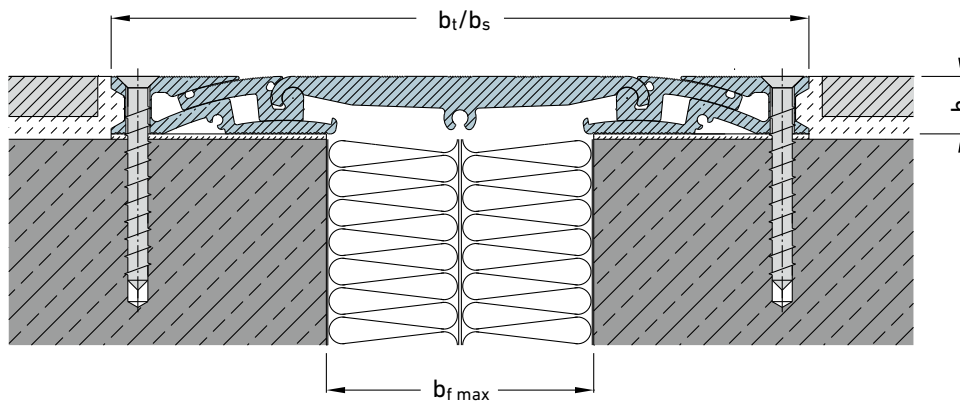
- 1** **Symmetrical visible surface has no gaps**  
avoids dirt accumulation
- 2** **Striated surface**  
ensures good skid resistance
- 3** **Extremely flat, fixing without arms**  
ideal for redevelopment, refurbishment, renovation
- 4** **Articulated telescoping system**  
absorbs movement in 3 directions
- 5** **Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	[kN]	[kN]	solid plastic tyres [kg/mm]
FS 220/20	60	40 (±20)	220	220	21	600	130	15
FS 260/20	100	40 (±20)	260	260	21	600	130	15
FS 380/20	215	40 (±20)	378	378	21	300	70	15

**Production length:** 3 m

**Standard colour:** Aluminium

**We recommend fixing with Multi-Monti Stainless steel screws MMS F 7,5 x 95/30 ES (available ex stock), fixing distance:** 200 mm.





# FS 255 / FS 295 / FS 410

FOR FLOORS WITH SMALL INSTALLATION HEIGHTS

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



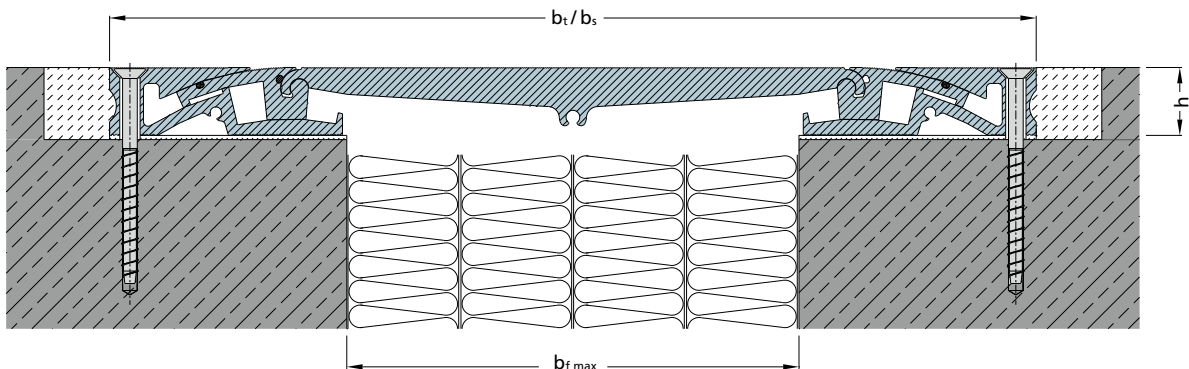
- 1 Removable**  
without destruction of the adjacent floor
- 2 Symmetrical visible surface has no gaps**  
avoids dirt accumulation
- 3 Extremely flat, fixing without arms**  
ideal for redevelopment, refurbishment, renovation
- 4 Articulated telescoping system**  
absorbs movement in 3 directions
- 5 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting

Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Load bearing capacity  [kN]	Load bearing capacity  [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
FS 255/30	50	60 (±30)	253	253	30	600	130	15
FS 295/30	90	60 (±30)	293	293	30	600	130	15
FS 410/30	205	60 (±30)	410	410	30	300	70	15

**Production length:** 3 m

**Standard colour:** Aluminium, FS 410: Aluminium anodized.

**We recommend fixing with Stainless steel Multi-Monti Screws MMS F 7,5 x 115/50 ES (available ex stock), fixing distance:** 200 mm.



# FSN 50

ALL-METAL EXPANSION JOINT. FOR SUBSEQUENT INSTALLATION


# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



- 1 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 2 Visible surface has no gaps**  
avoids dirt accumulation
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system**  
absorbs movement in 3 directions

**Ideal for redevelopment, refurbishment, renovation**

Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Thickness of alu side plates $h_1$ [mm]	Load bearing capacity 
FSN 50	55	10 ( $\pm 5$ )	173	173	15	3	pedestrians

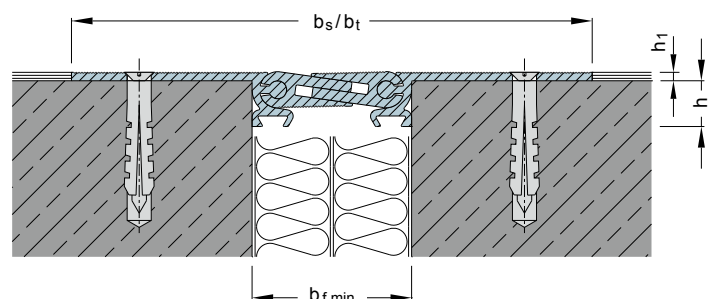
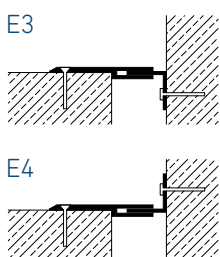
\* Light vehicles on request.

**Production length:** 4 m

**Standard colour:** Aluminium

**Mounting distance:** 300 mm

Corner versions:

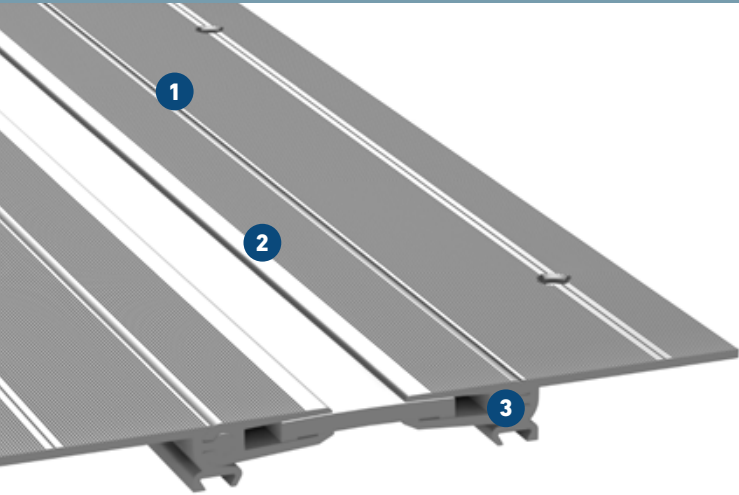


# FSN 99

ALL-METAL EXPANSION JOINT. FOR SUBSEQUENT INSTALLATION

# MIGUTRANS


HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



- 1 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 2 Symmetrical visible surface has no gaps**  
avoids dirt accumulation
- 3 Striated surface**  
ensures good skid resistance

**Articulated telescoping system**  
absorbs movement in 3 directions

**Ideal for redevelopment, refurbishment, renovation**

Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Thickness of alu side plates $h_1$ [mm]	Load bearing capacity 
FSN 99	100	40 ( $\pm 20$ )	219	219	15	3	pedestrians

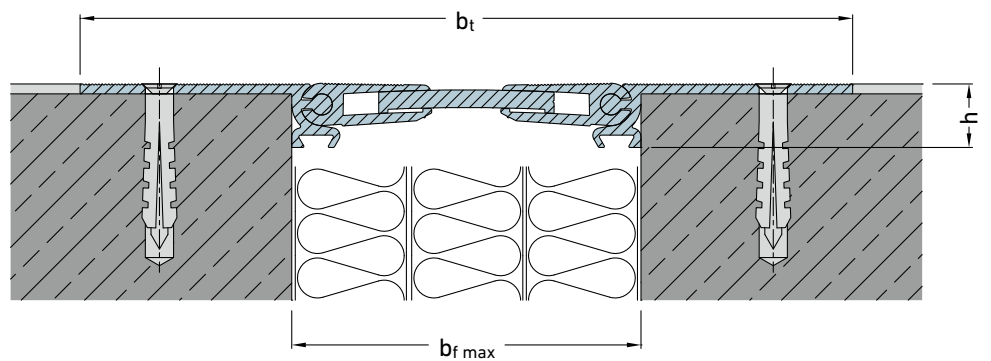
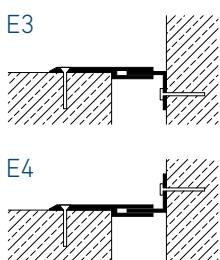
\* Light vehicles on request.

**Production length:** 4 m

**Standard colour:** Aluminium

**Mounting distance:** 300 mm

Corner versions:

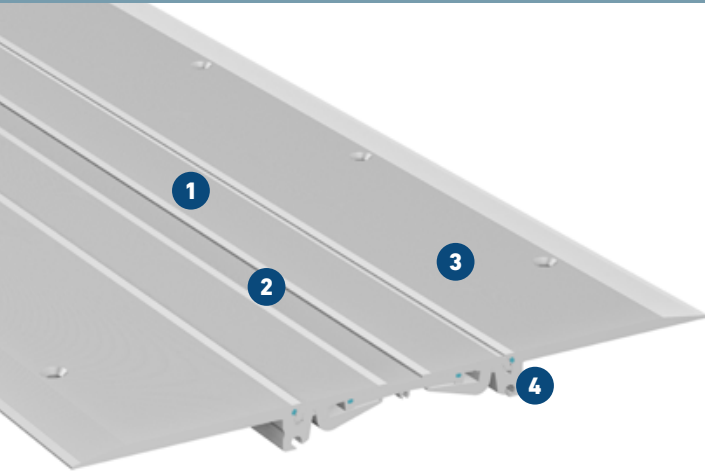


# FSNX 146

ALL-METAL EXPANSION JOINT. FOR SUBSEQUENT INSTALLATION

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



- 1 New, improved design**  
Innovative layout of the line
- 2 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system with optimized movement control**  
absorbs movement in 3 directions, with improved shock absorbing elements

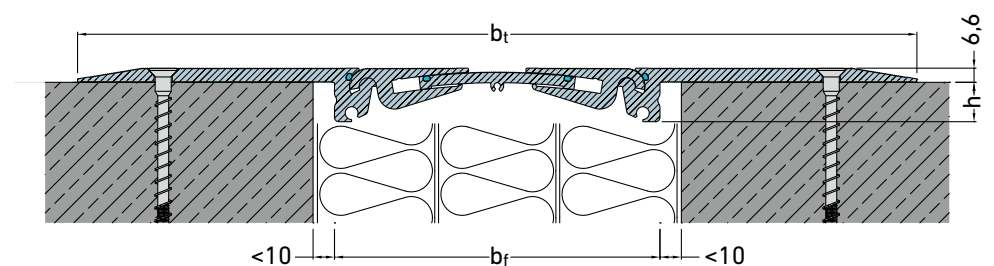
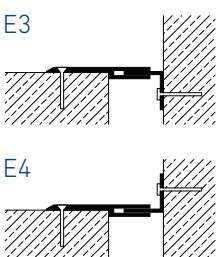
Expansion joint cover	Joint width max. $b_f$ [mm]	Total movement $\Delta b_f$ [mm]	Visible width $b_s$ [mm]	Total width $b_t$ [mm]	Joint height $h$ [mm]	Thickness of alu side plates $h_1$ [mm]	Load bearing capacity [kN]	Load bearing capacity  solid plastic tyres [kg/mm]
FSNX 146	152	50 ( $\pm 25$ )	392	392	18	6,6	30	3,5

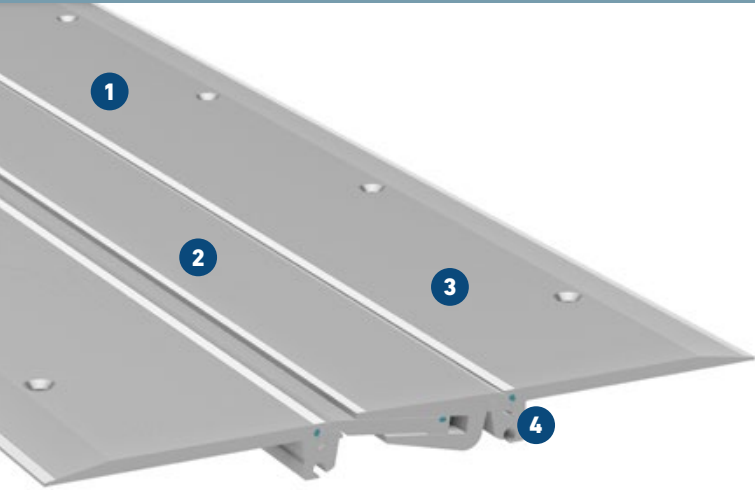
**Production length:** 4 m

**Standard colour:** Aluminium




**Installation instructions:** Any unevenness in the surface to which the expansion joint is being fixed must be remedied by using an epoxy adhesive e.g. Reckli-Adhesive EP. The aluminium brackets must then be fixed at both sides with countersunk stainless.

Corner versions:





- 1 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 2 Visible surface has no gaps**  
avoids dirt accumulation
- 3 Striated surface**  
ensures good skid resistance
- 4 Articulated telescoping system**  
absorbs movement in 3 directions

Expansion joint cover	Joint width min.	Total movement	Visible width	Total width	Installation height	Thickness of alu side plates	Load bearing capacity 	Load bearing capacity 	Load bearing capacity  solid plastic tyres
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	$h_1$ [mm]			
FSN 46 */**	50	20 ( $\pm 10$ )	286	286	21	6,6	90	70	6,5
FSNX 75	83	20 ( $\pm 10$ )	320	320	18	6,6	90	70	6,5
FSNX 105	111	20 ( $\pm 10$ )	351	351	22	6,6	90	70	6,5
FSNX 110	116	30 ( $\pm 15$ )	354	354	18	6,6	90	70	6,5
FSNX 130	140	40 ( $\pm 20$ )	378	378	27	6,6	90	35	6,5
FSNX 146	152	50 ( $\pm 25$ )	392	392	18	6,6	30	25	3,5
FSNX 155	162	40 ( $\pm 20$ )	398	398	22	6,6	90	35	6,5
FSNX 160	168	60 ( $\pm 30$ )	408	408	30	6,6	90	35	6,5
FSN 185 **	200	60 ( $\pm 30$ )	409	409	18	6,6	90	35	6,5
FSN 280 **	240	85 ( $\pm 42,5$ )	454	454	18	6,6	35	35	6,5
FSN 285 **	290	100 ( $\pm 50$ )	508	508	21	6,6	35		

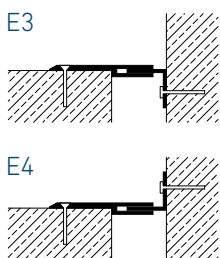
\* cannot take settlements

\*\* The joint width should not differ substantially from the necessary joint width  $b_f$ .

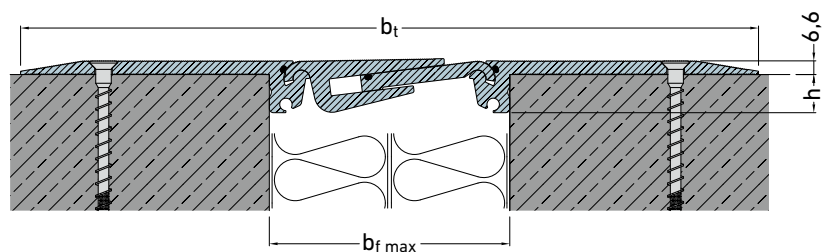
**Production length:** 4 m (FSN 185, FSN 280 and FSN 285: 3 m)

**Standard colour:** Aluminium

Corner versions:

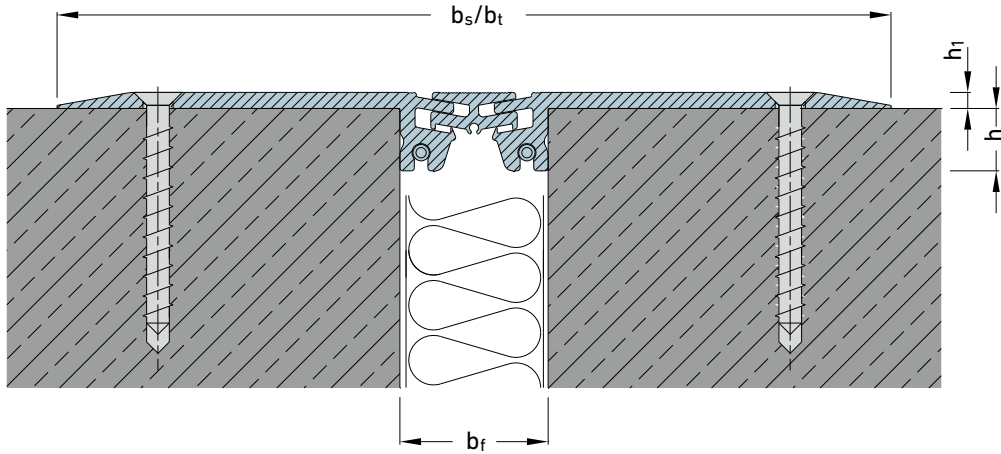


FSNX 110

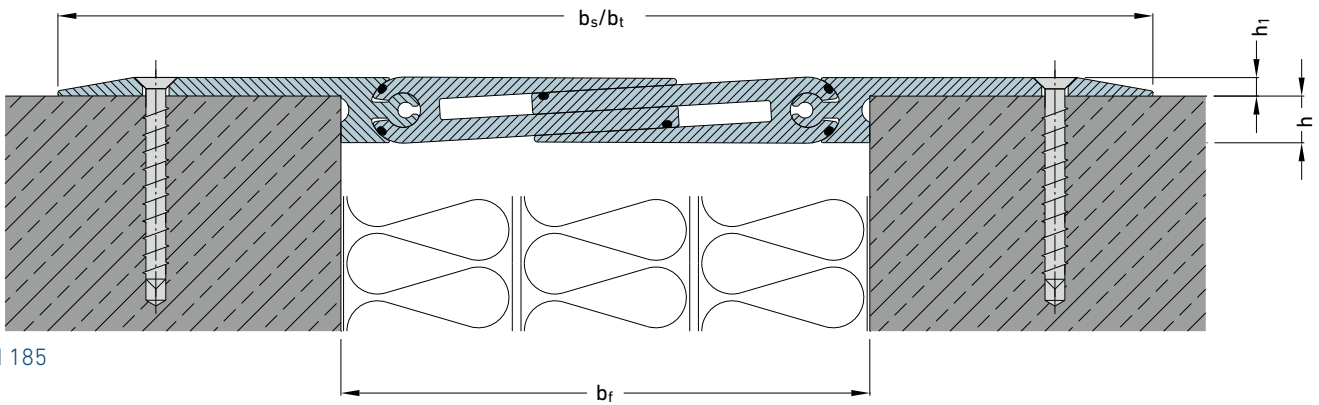




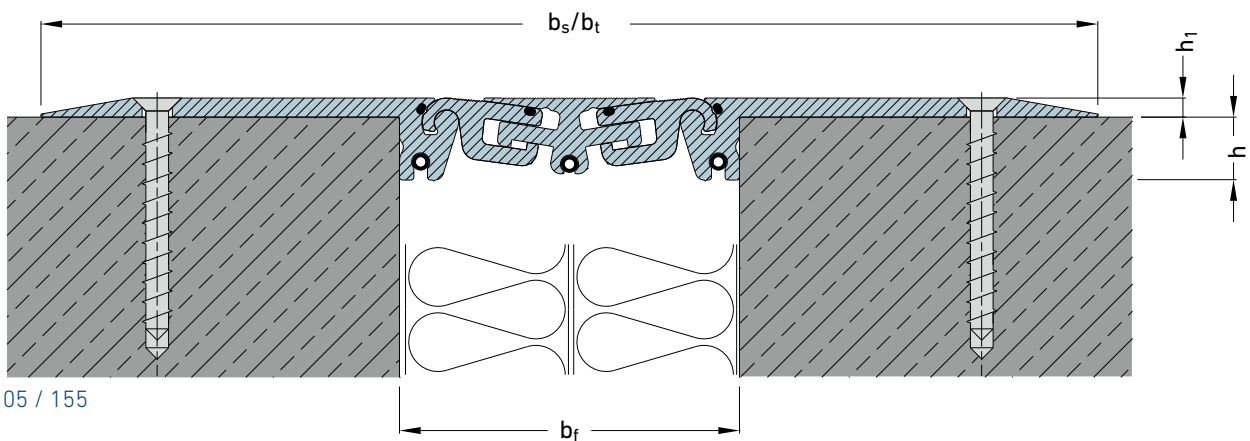
FSN 46



FSN 185



FSNX 105 / 155



**Installation Instructions:**

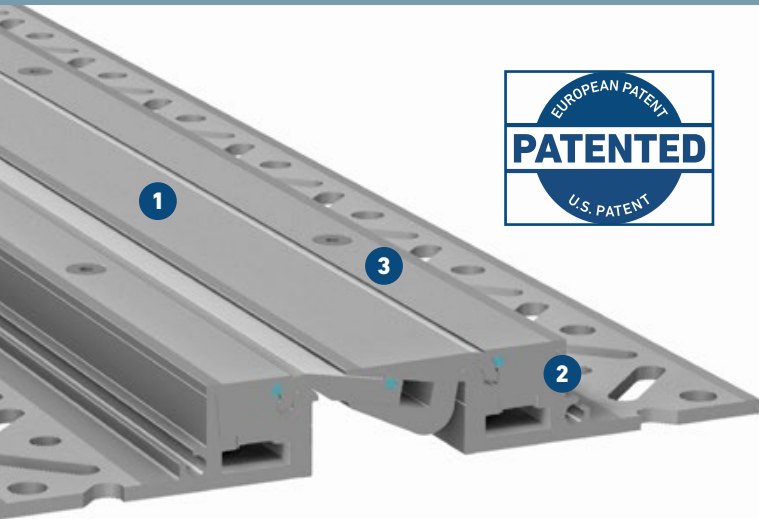
The lateral support legs of the profiles must be glued into a thin levelling layer of epoxy resin, e.g. Reckli-Kleber EP. Then the support legs are anchored on both sides with thread-cutting stainless steel screws, e.g. MMS-F 7.5 ES for concrete at intervals of 200 mm.

# FSRX ... 30

REPLACEABLE EXPANSION JOINT COVER FOR FLOORS WITH HEAVY LOAD

# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



## Expansion joint cover with new design Generation X

- 1 Visible surface has not gaps**  
prevents accumulation of dirt, minimized cleaning time and effort
- 2 Solid all-metal expansion joint**  
hard wearing, maintenance-free, long lasting
- 3 Striated surface**  
ensures good skid resistance

**Articulated telescoping system**  
absorbs movement in 3 directions

**Renovation-friendly installation height of only 30 mm**

**Punctured leg with MIGUA mounting matrix®**  
Provides optimal anchoring alternatives in the underground

**Now available Anodized!**  
Perfect match with interior design. Color-fast and light resistant.

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Joint height	Load bearing capacity	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	$h$ [mm]	[kN]	[kN]	solid plastic tyres [kg/mm]
FSRX 111/30	50	20 ( $\pm 10$ )	111	240	30	300	130	10
FSRX 139/30	75	20 ( $\pm 10$ )	139	268	30	300	150	15
FSRX 144/30	75	30 ( $\pm 15$ )	144	273	30	300	130	10
FSRX 168/30	100	40 ( $\pm 20$ )	168	297	30	300	130	10
FSRX 180/30	116	50 ( $\pm 25$ )	180	309	30	30		3,5
FSRX 196/30	130	60 ( $\pm 30$ )	196	325	30	300	100	10

### The movement component is easy to install and can be replaced without damage.

Thus, the FSRX joint cover can easily be renewed or replaced, e.g. in case of mechanical damage, wear, if a change of colour is desired or the actual joint movements turn out to be different than expected.

**Production length:** 4 m

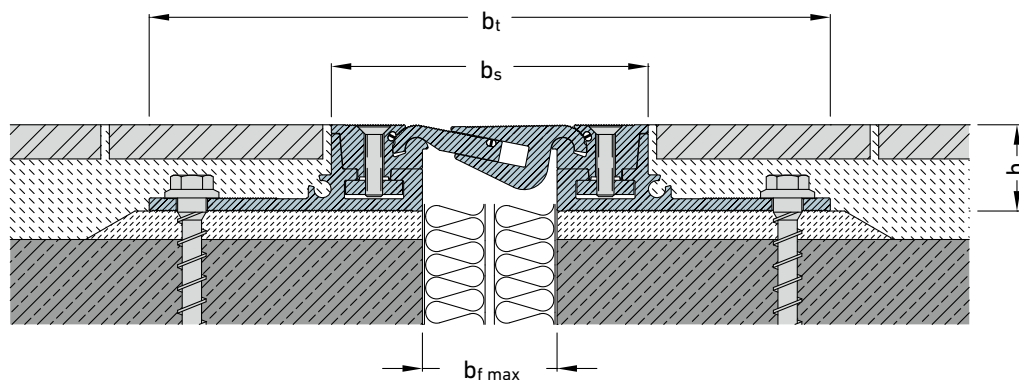
**Standard colour:** Aluminium, available in anodized version, too

Slip resistance according to DIN 51130 rating group R10 (across the joint), R9 (along the joint).

Wall connections and molded parts available on request.

The joint covers FSRX 139 and FSRX 180 are equipped with symmetrical movement components.

For details on the anodized version, see page 49.



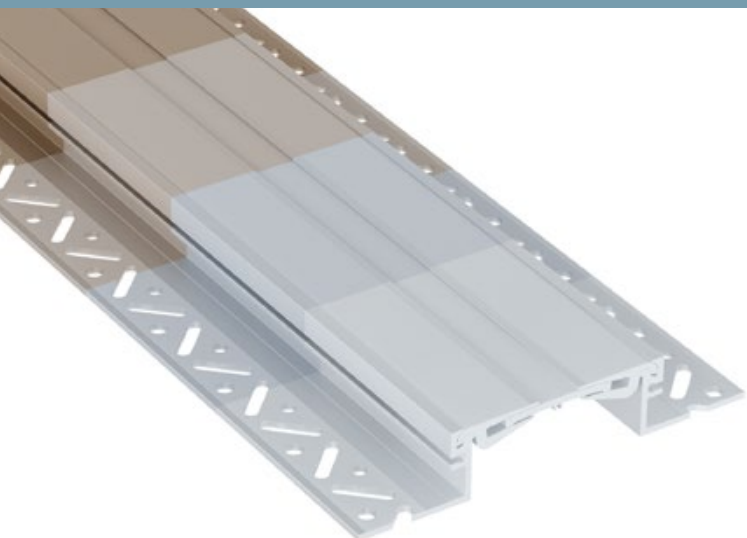
FSRX 111 / 30

# ANODIZED EXPANSION JOINT COVERS

FOR HEAVY DUTY FLOORS

# MIGUTRANS




HEAVY-DUTY ALL-METAL JOINT SOLUTIONS  
FOR LARGE TRAFFIC LOADS



Selected expansion joint covers can now be integrated into your projects in different colour shades. This gives you even more freedom of design when working with expansion joint covers. Initially available in four colour shades, we now offer you the possibility of defining homogeneous surfaces.

And if these do not match your current project, we will be happy to find the right colour shade together with you on request.

Whether tone-in-tone with the adjacent floor covering or deliberately contrasting colours for an additional effect - it's all your choice ...

Expansion joint cover	Joint width max.	Total movement	Visible width	Total width	Load bearing capacity	Load bearing capacity	Load bearing capacity
	$b_f$ [mm]	$\Delta b_f$ [mm]	$b_s$ [mm]	$b_t$ [mm]	 [kN]	 [kN]	 solid plastic tyres [kg/mm]
ESF 10 AL	10	4 (±2)	10	77	600	130	6,5
FS 40	35	16 (±8)	40	161-173	300	70	6,5
FS 50	30	10 (±5)	53	138-140	90	35	3
FSX 75	50	20 (±10)	77	198	300	130	10
FSL 77	50	22 (±11)	77	164	12*		
SFS 90	50	20 (±10)	90	183	300	69	6,5
SFS 115	75	30 (±15)	115	205	300	69	6,5
SFS 135	100	40 (±20)	135	228	300	46	6,5
FSX 105	75	20 (±10)	105	226	600	150	15
FSX 110	75	30 (±15)	110	231	300	130	10
FSX 130	100	40 (±20)	134	255	300	130	10
FSX 146	117	50 (±25)	146	267	30		3,5
FSX 155	120	40 (±20)	156	227	600	130	15
FSX 160	130	60 (±30)	162	283	300	100	10

\* Load bearing capacity private cars

As well as all expansion joints of type FSRX

**Profile height:** The profiles are available in all profile heights of the basic profiles (see data sheet there)

**Production length:** 4 m

**Standard colour:** Aluminium, available in anodized version, too

Further installation heights on request.

**Applicable for anodized expansion joint covers:**

By anodizing the surface is hardened, but scratches can not be ruled out under mechanical stress of the profiles.

Slight color and / or gloss deviations between different batches or deliveries do not constitute a reason for complaint.

The processing is carried out in accordance with DIN 17611 and the Qualanod (Quality Label for Sulphuric Acid-Based Anodizing of Aluminium) regulations for the anodization of aluminum.

The expansion joint covers must be cleaned and maintained in accordance with the specifications of the Qualanod and the leaflet A5 of the aluminum center.

We are happy to advise you.

**Standard colors based on EURAS color fans:**

 C 0 Nature  C 31 Light  C 32 Light bronze

Other colors on request.

## WALL-CONNECTION VERSIONS DIMENSIONS

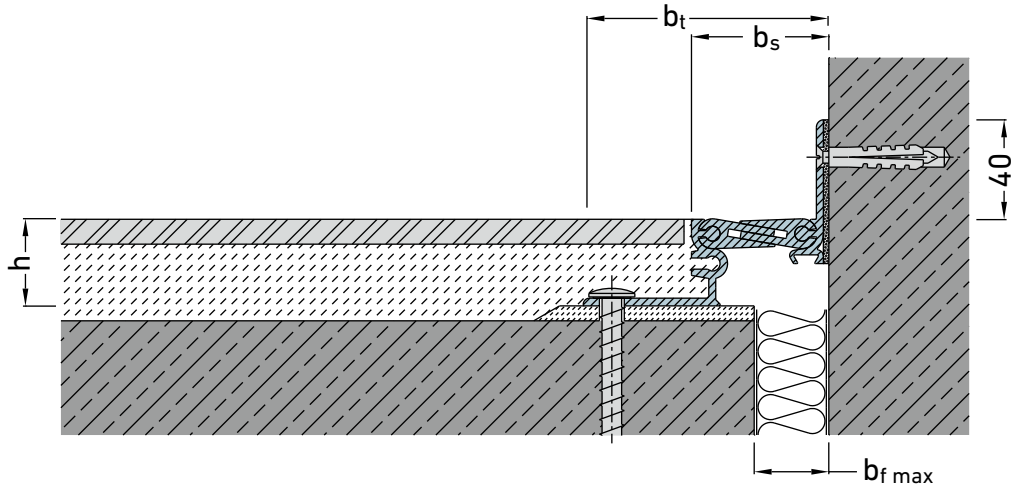
Expansion joint cover	Joint height* h [mm]	Wall-connection version E3			Wall-connection version E4		
		b <sub>s</sub> [mm]	b <sub>t</sub> [mm]	Joint depth min h <sub>E</sub> [mm]	b <sub>s</sub> [mm]	b <sub>t</sub> [mm]	Joint depth min h <sub>E</sub> [mm]
FS 40**	19, 25, 35, 60	40	101	44	40	101	40
FS 46	50	48	109	35	52	113	46
FS 50	20, 35, 50, 90	55	99	31	55	99	40
FSX 75	22, 30, 40, 50, 60, 80, 100	79	140	60	81	142	40
FS 99	20, 35, 50, 90	101	145	31	101	145	40
FSX 105	22*, 30, 50	106	168	60	109	170	40
FSX 110	30, 40, 50, 60, 80, 100	112	173	60	114	175	40
FS 110 ES	42, 52, 62, 77, 87, 97	116	173	60	116	173	40
FSX 130	40, 50, 60, 80, 100	136	197	60	138	199	40
FSX 146	22, 30, 40, 50, 60, 80, 100	148	209	60	150	211	40
FSX 155	22*, 30, 50	158	218	60	160	218	40
FSX 160	40, 50, 60, 80, 100	164	225	60	166	227	40
FS 167	30, 42, 52, 62	169	227	60	169	227	40
FS 185	27, 40, 80	186	246	75	186	246	50
FSV 235	45, 80, (90), (130), (140)	210	271	75	210	271	50
FSV 280	45, 80, (90), (130), (140)	256	317	75	256	317	50
FSV 285	27, 40, 80	285	345	75	285	345	50
FSV 335	45, 80, (90), (130), (140)	310	372	75	310	372	50
FSRX 111	30	96	160	60	98	162	40
FSRX 139	30	124	188	60	126	190	40
FSRX 144	30	129	193	60	131	195	40
FSRX 168	30	153	217	60	155	219	40
FSRX 180	30	165	229	60	167	231	40
FSRX 196	30	181	245	60	183	247	40
FSN 46			168	35		172	46
FSN 50			115	31		115	40
FSNX 75			202	60		204	40
FSN 99			161	31		161	40
FSNX 105			230	60		232	40
FSNX 110			235	60		237	40
FSNX 130			259	60		261	40
FSNX 146			271	60		273	40
FSNX 155			281	60		281	24
FSNX 160			287	60		289	30
FSN 185			298	75		298	50
FSN 280			342	75		342	50
FSN 285			397	75		397	50
FSL 77	20, 35, 50, 90	79	123	31	79	123	40
FSL 104	20, 35, 50, 90	107	150	31	107	150	40
FSL 113	20, 35, 50, 90	115	159	31	115	159	40
SFS 90	24, 30, 42, 50				90	135	50
SFS 115	24, 30, 42, 50				115	160	50
SFS 135	24, 30, 42, 50				135	180	50

\* Further expansion joint heights available on request

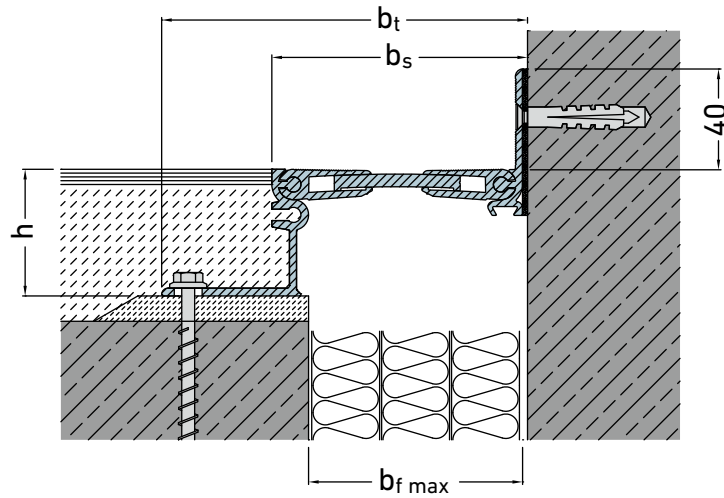
\*\* Corner versions on demand only

## WALL-CONNECTION VERSIONS

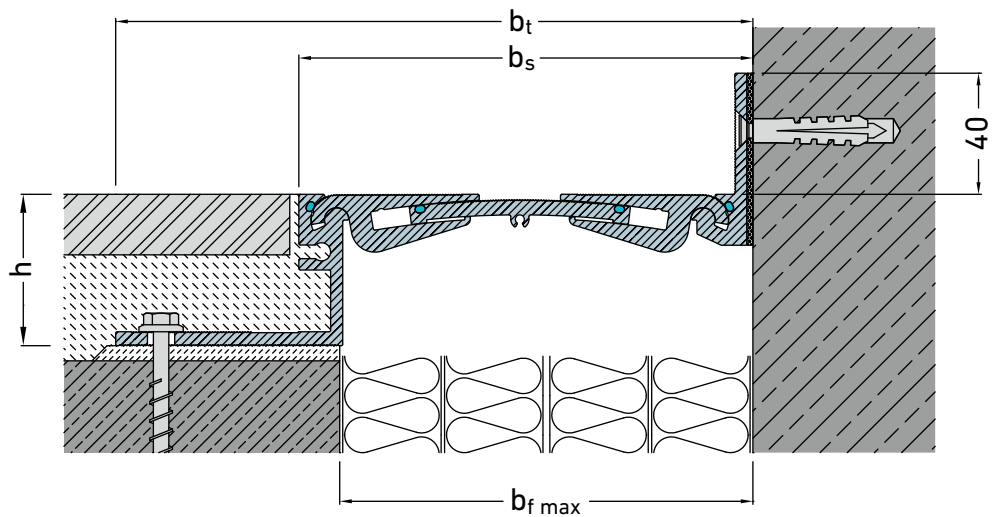
### FS E4



FS 50 E4



FS 99 E4

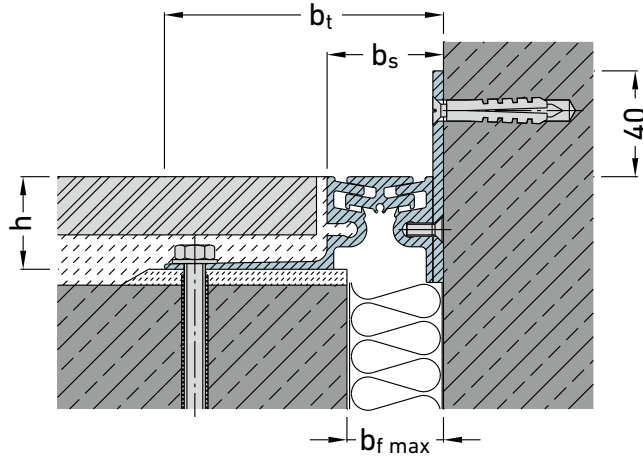


FSX 146 E4

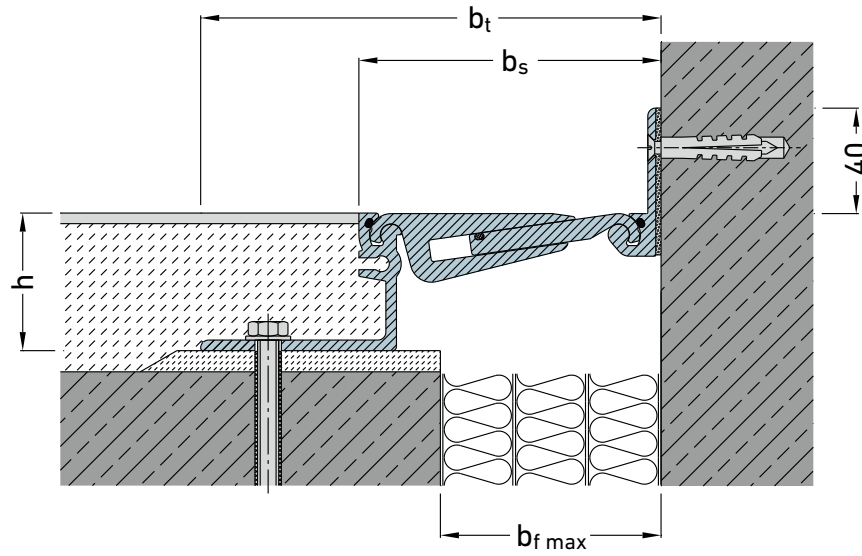


## WALL-CONNECTION VERSIONS

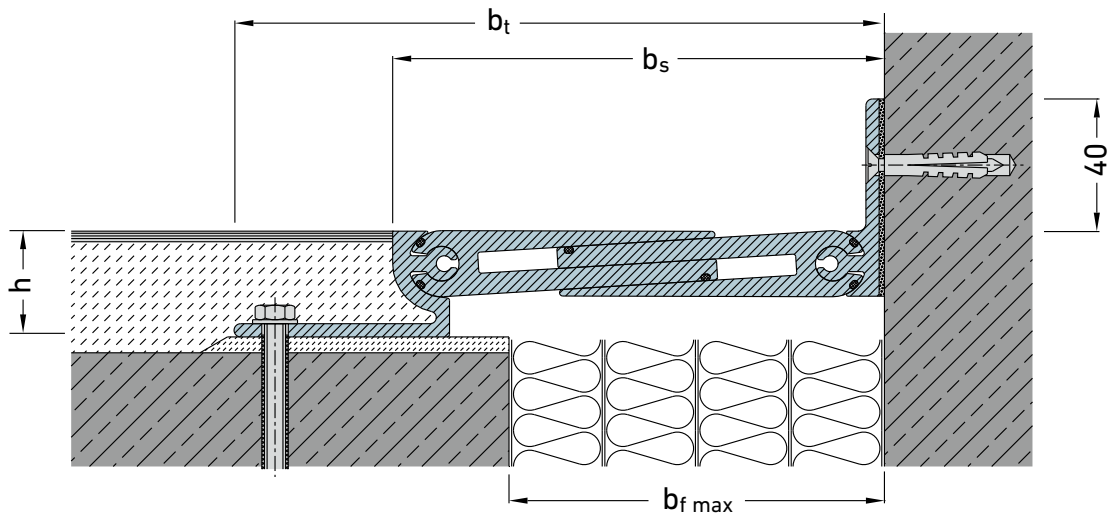
### FS E4



FS 40 E4



FSX 75 E4  
FSX 110 E4  
FSX 130 E4  
FSX 160 E4

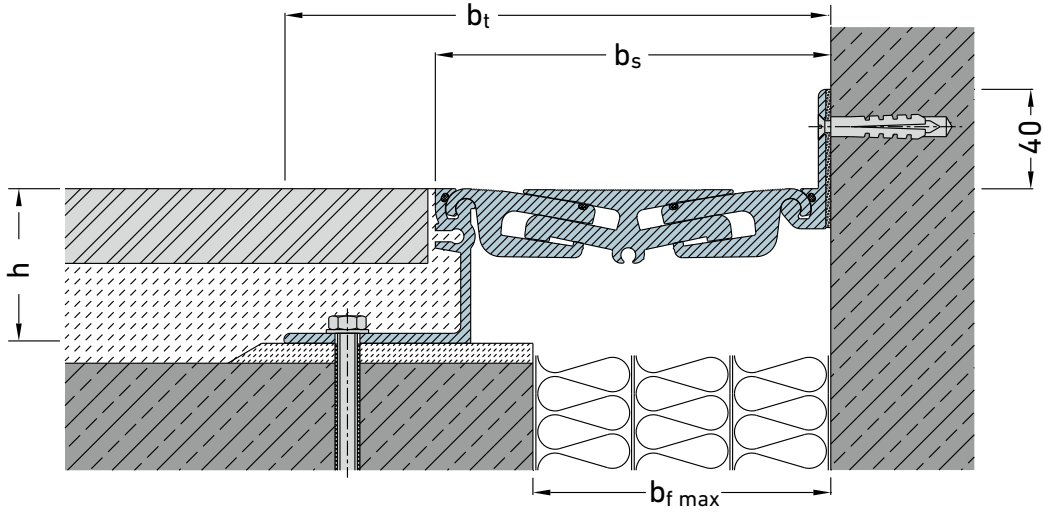


FS 185 E4

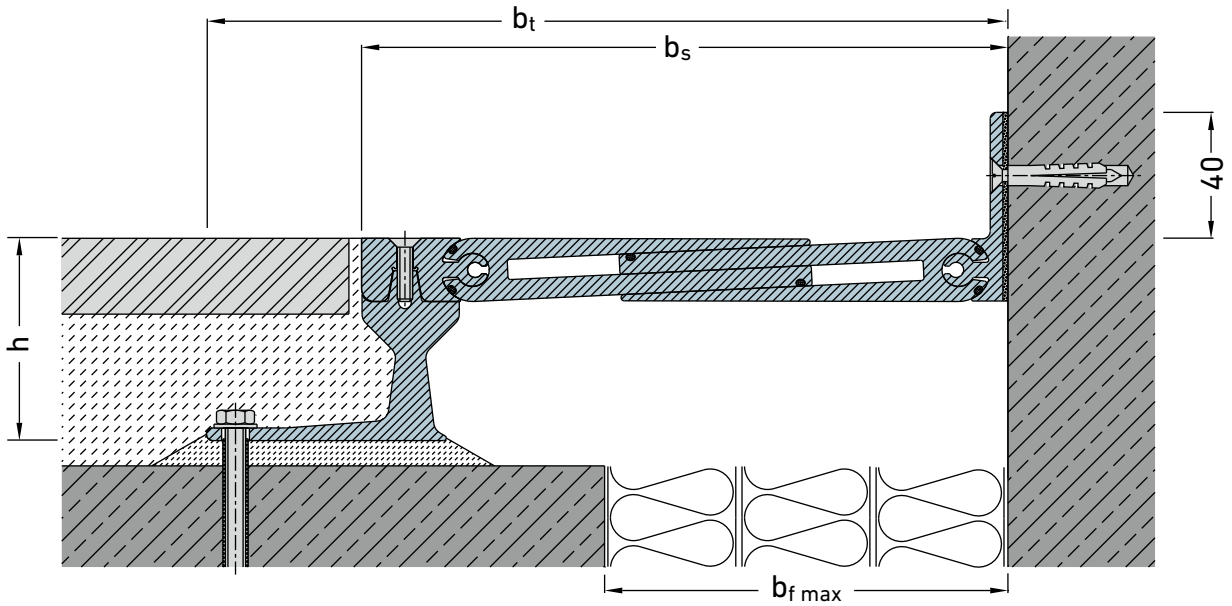
## WALL-CONNECTION VERSIONS

FS / FSV E4

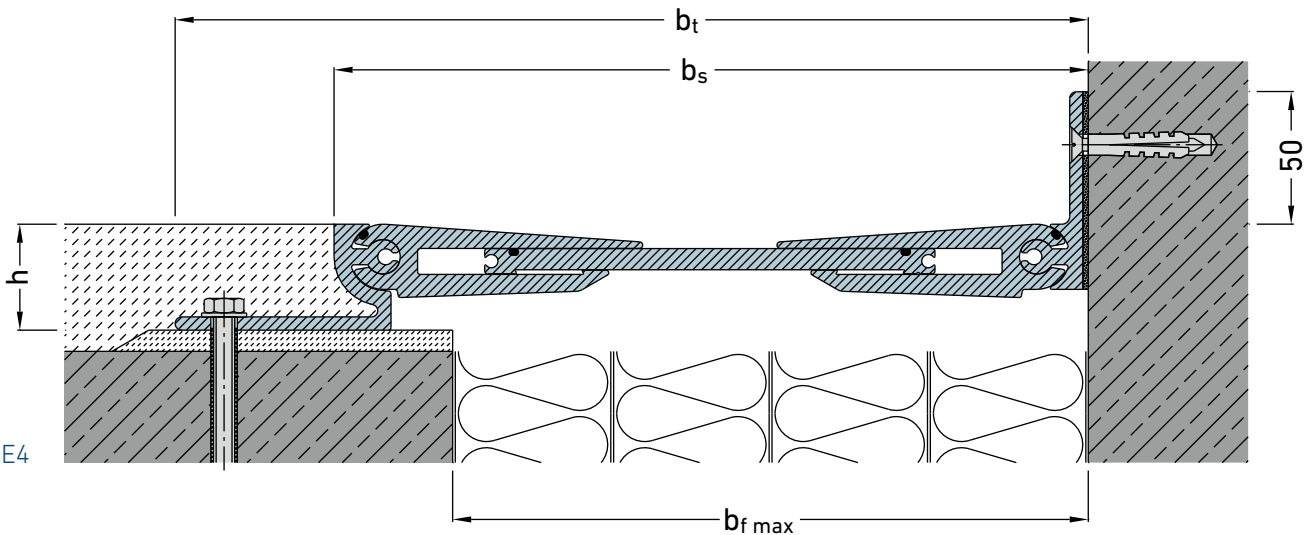
FSX 105 E4  
FSX 155 E4



FSV 235 E4  
FSV 280 E4

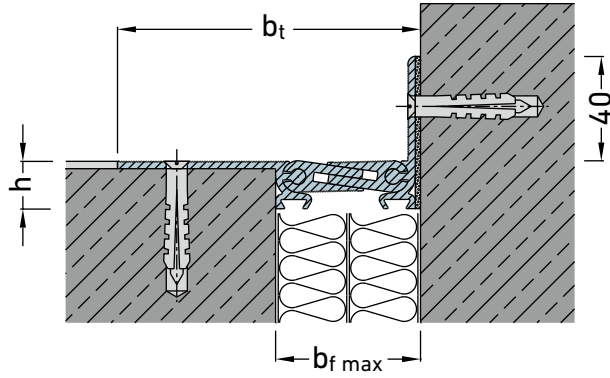


FSV 285 E4

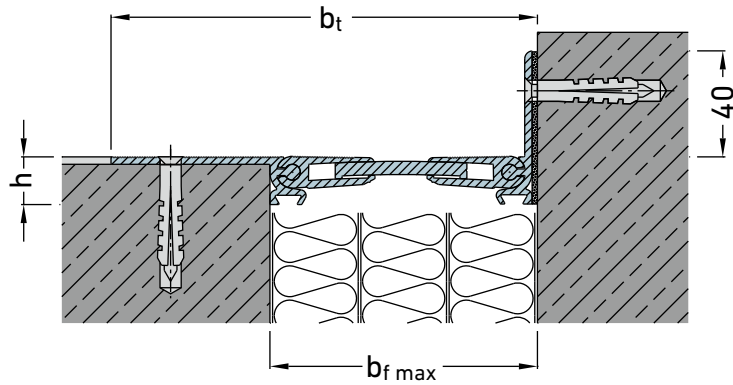


## WALL-CONNECTION VERSIONS

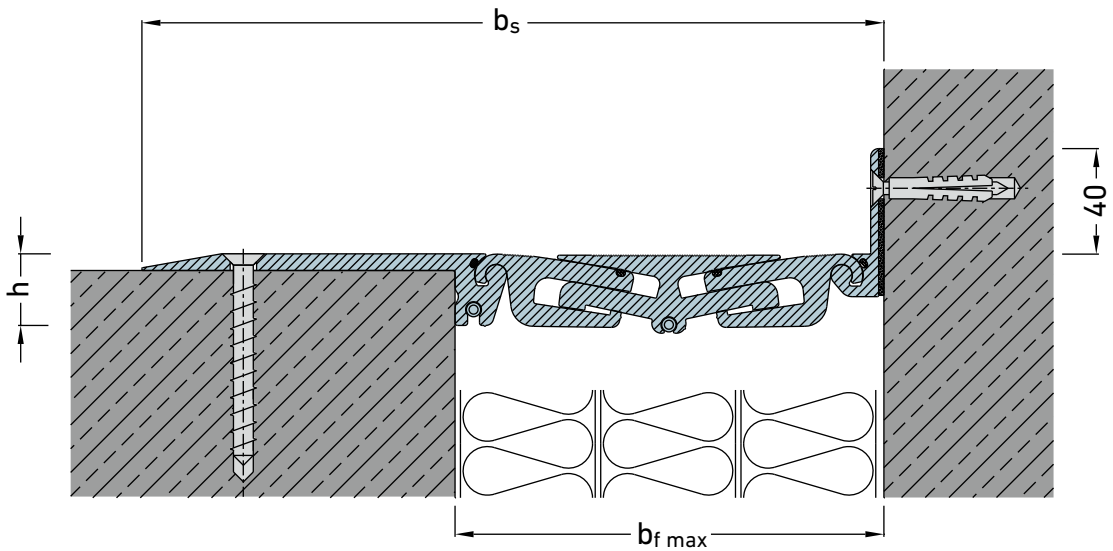
### FSN E4



FSN 50 E4



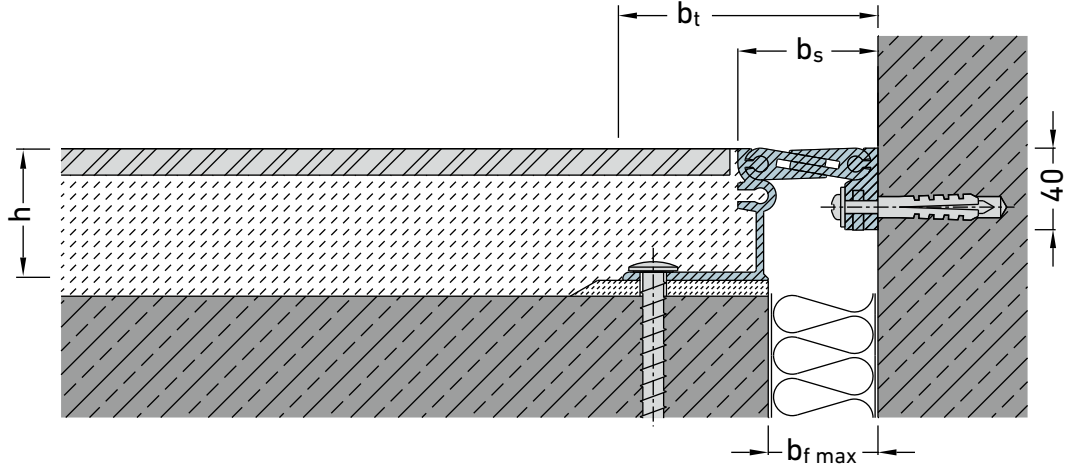
FSN 99 E4  
(FSNX 146 E4)



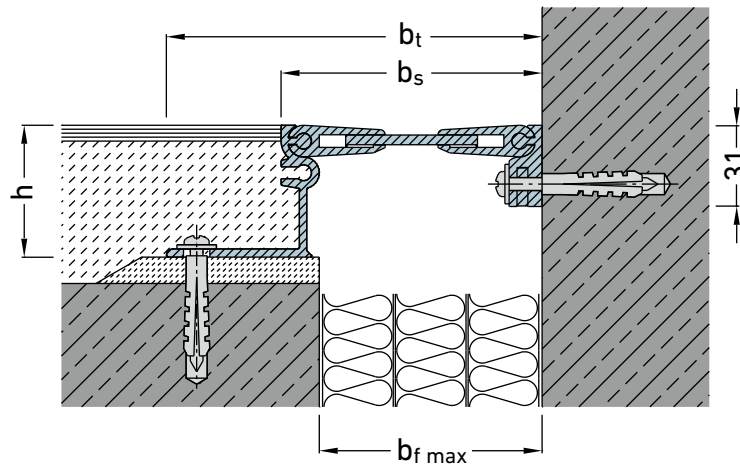
FSNX 105 E4  
FSNX 155 E4

## WALL-CONNECTION VERSIONS

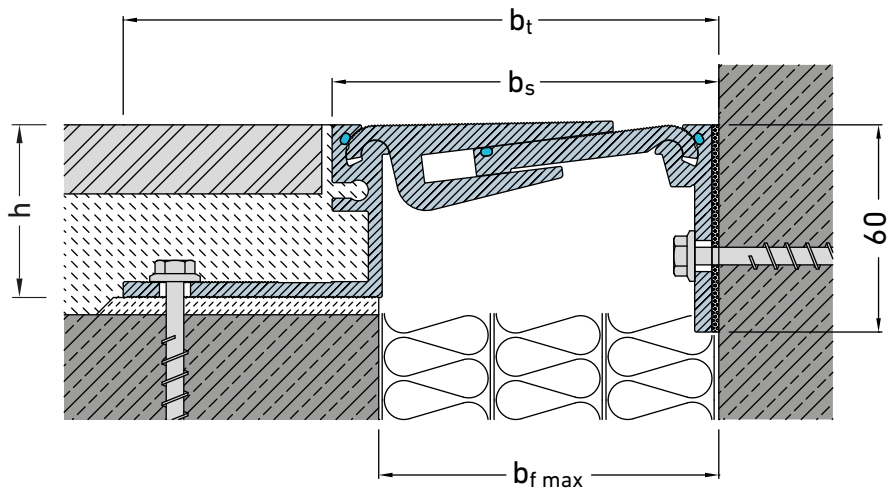
### FS E3



FS 50 E3



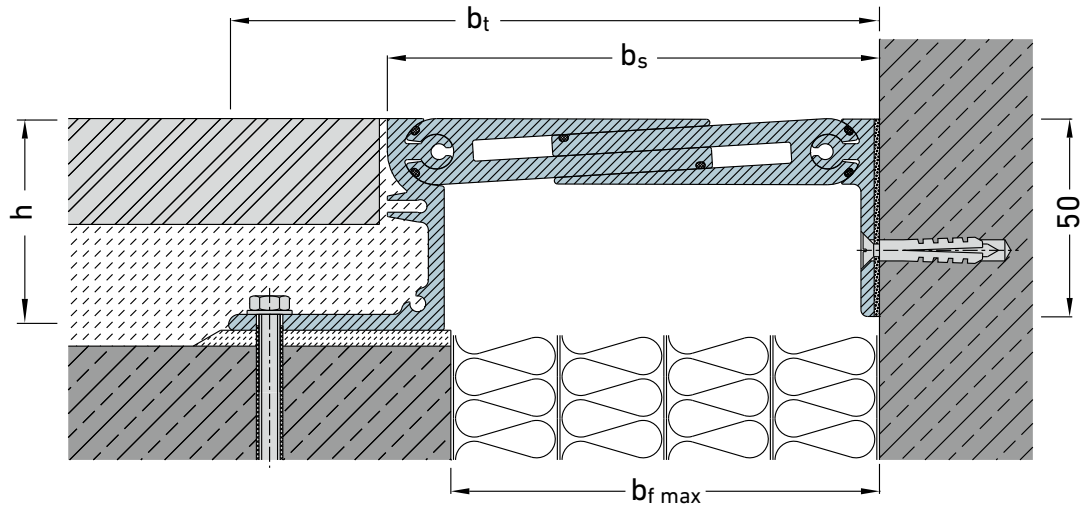
FS 99 E3



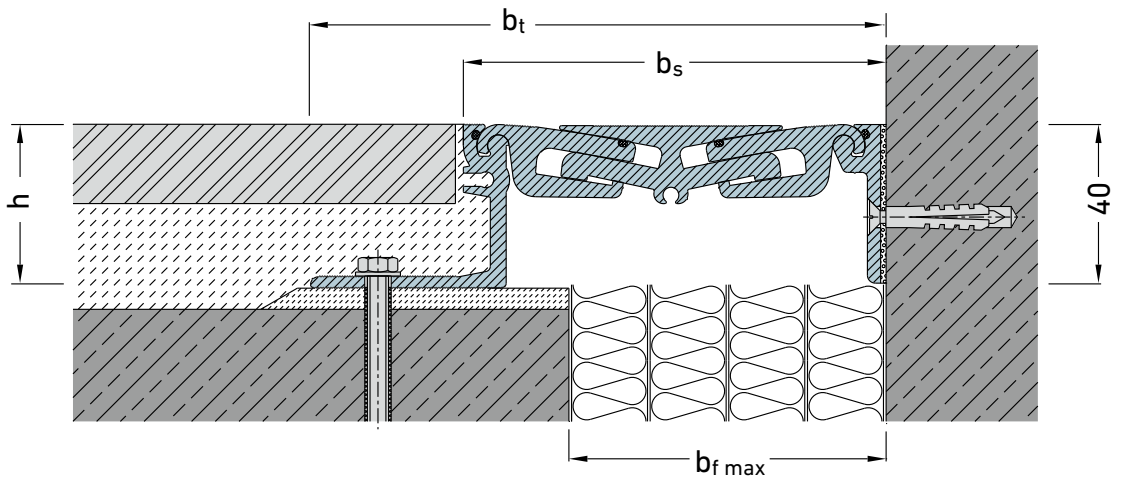
FSX 75 E3  
 FSX 110 E3  
 FSX 130 E3  
 FSX 160 E3

## WALL-CONNECTION VERSIONS

### FS E3



FS 185 E3



FSX 155 E3

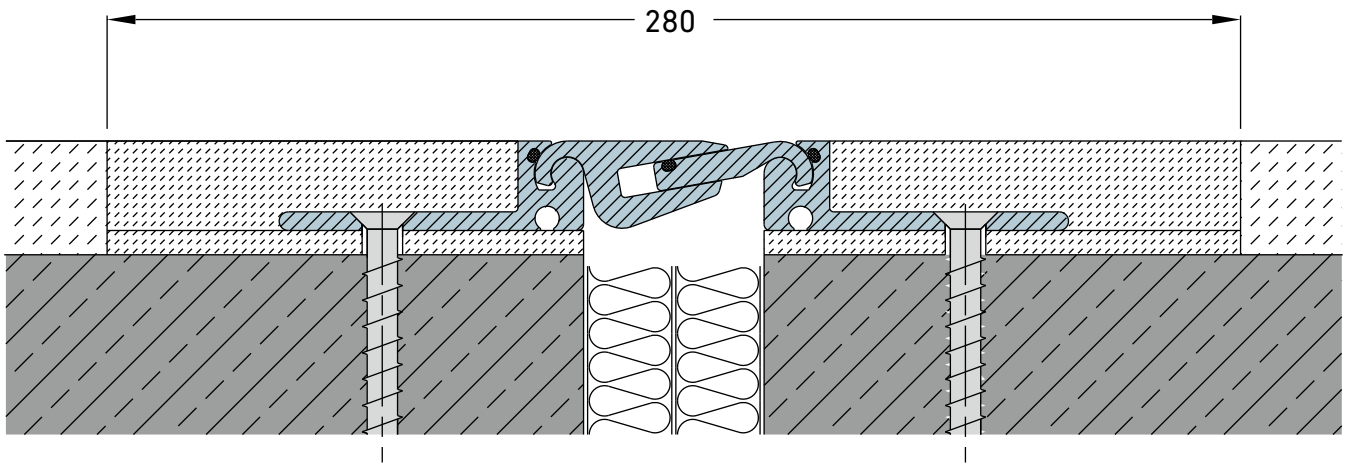
When using the E3 versions, please make use of our technical consultation services.

Kindly take the fixing facility into account when installing the E3 connection

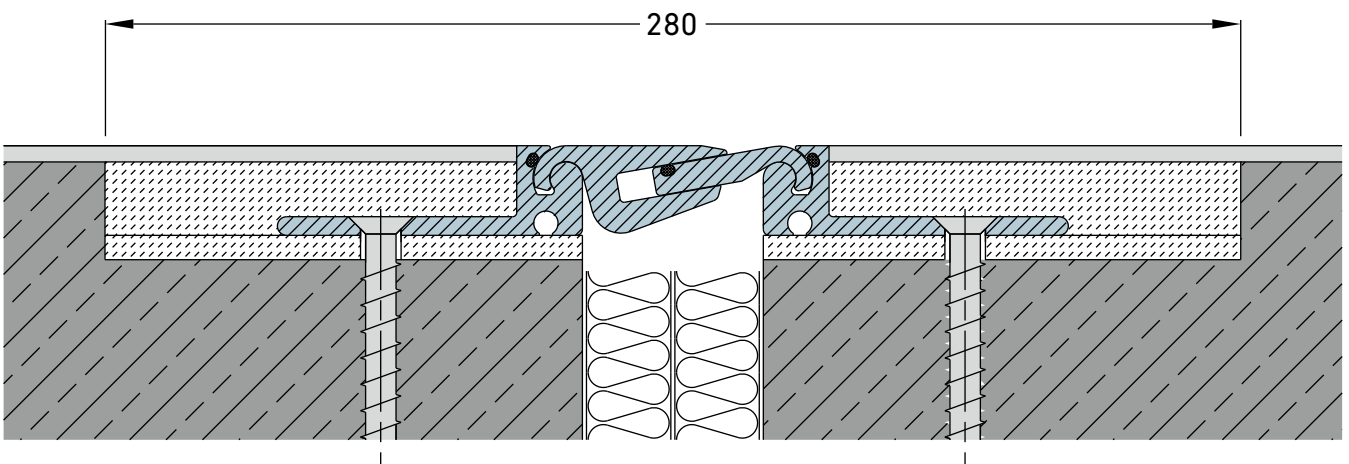
## INSTALLATION SUGGESTIONS

IN SCREED

IN EXISTING CUT-OUTS



MIGUTRANS expansion joint construction, e.g. in conjunction with hard-aggregate floor screed, magnesite screed: FSX 75/22



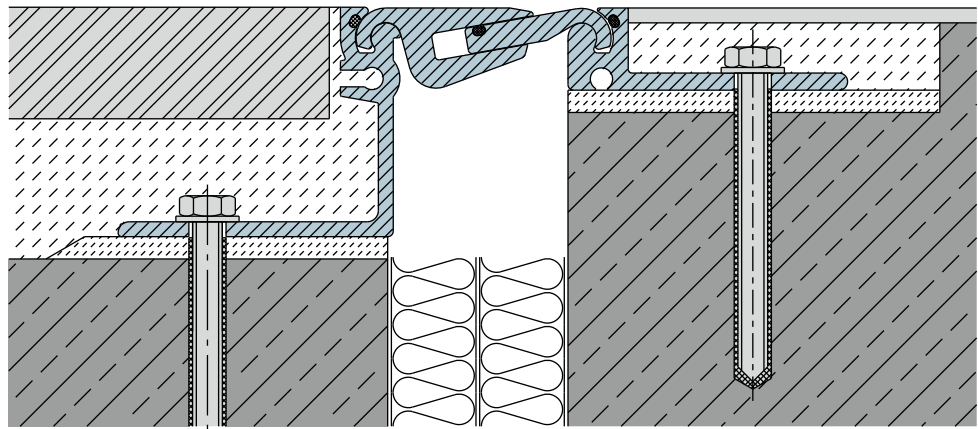
MIGUTRANS expansion joint construction in existing on-site cut-out with mounted expansion joint cover: FSX 75/22



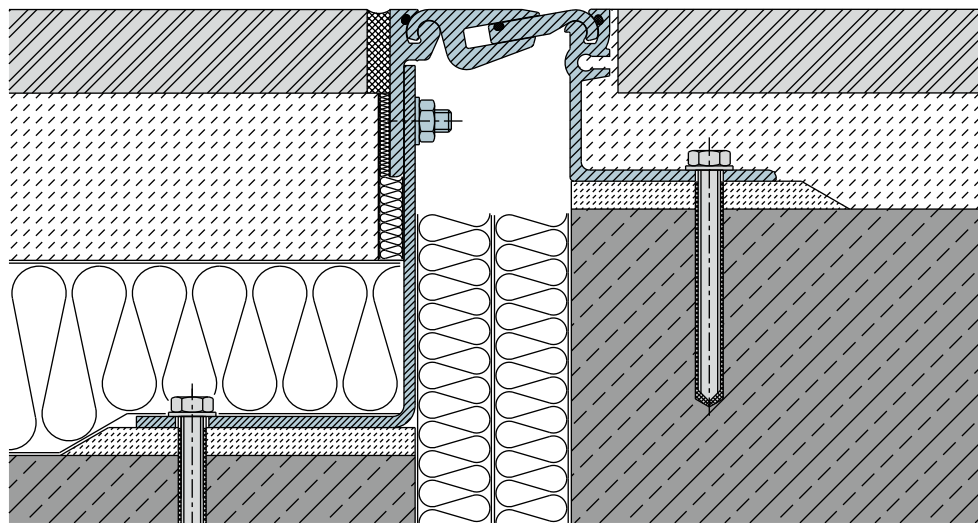
## INSTALLATION SUGGESTIONS

### EXPANSION JOINT COMBINATIONS

FSX 75/22-60

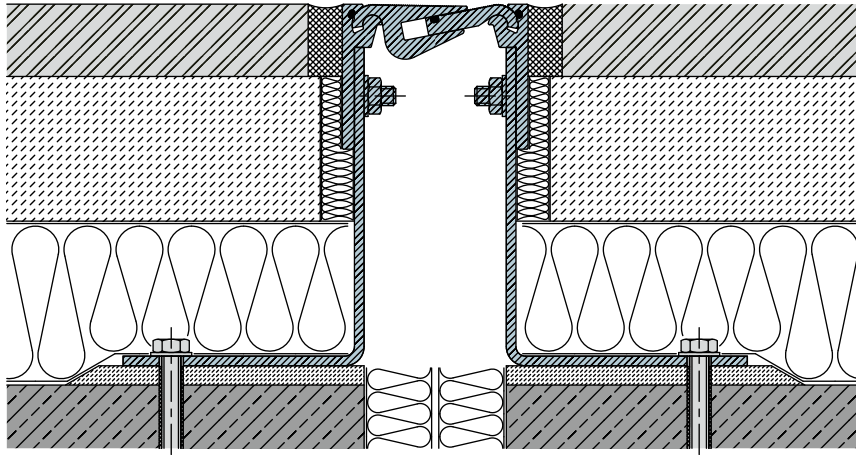


FSX 75/60-150

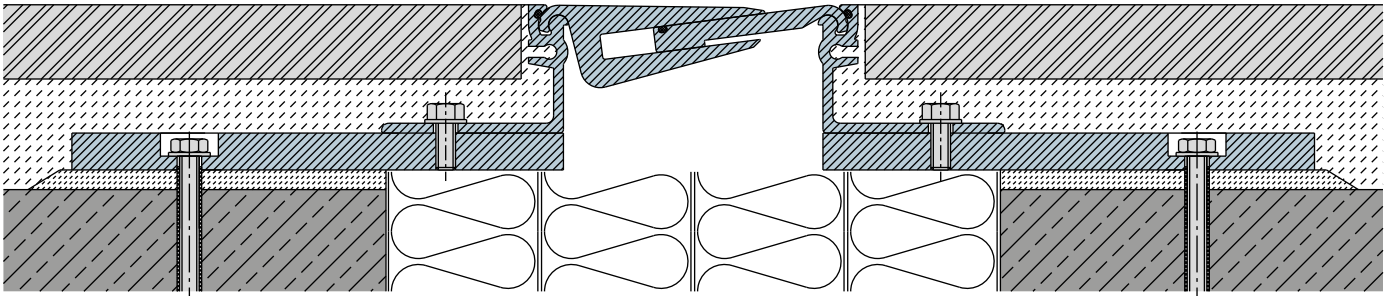


## INSTALLATION SUGGESTIONS

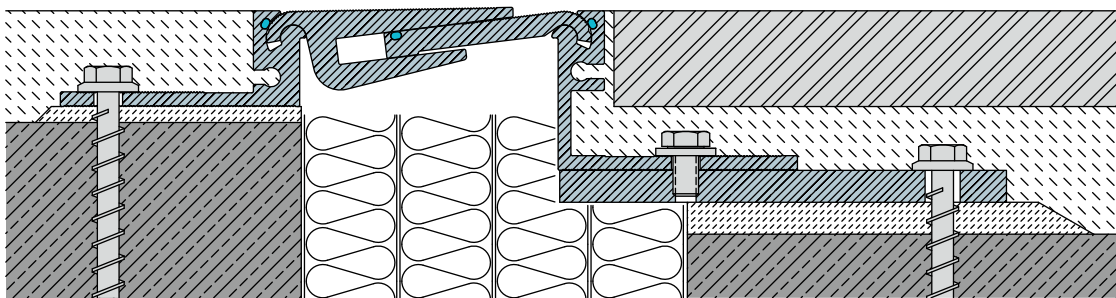
LARGE CONSTRUCTION HEIGHT  
EXTREMELY WIDE CONSTRUCTION JOINTS



MIGUTRANS expansion joint construction for large construction heights

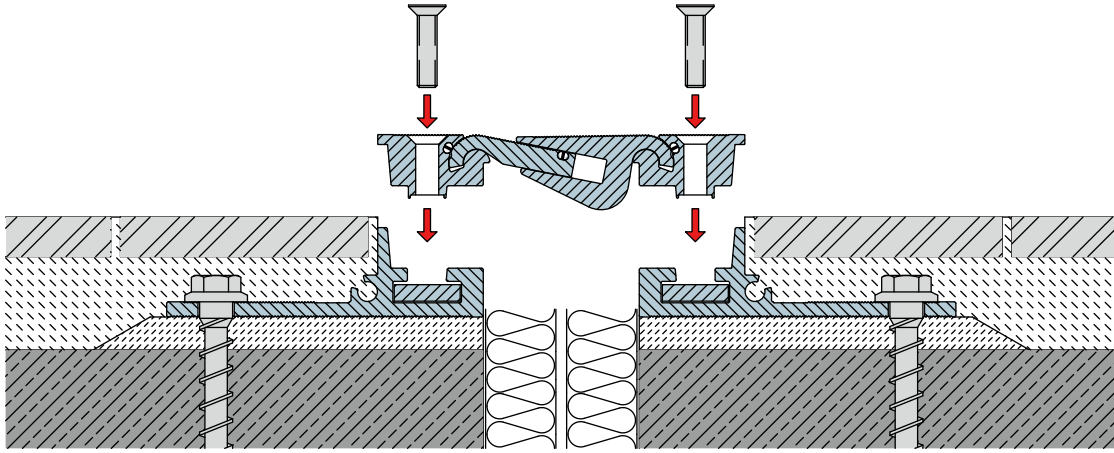


MIGUTRANS expansion joint construction with factory-supplied aluminium plates for extremely wide construction joints

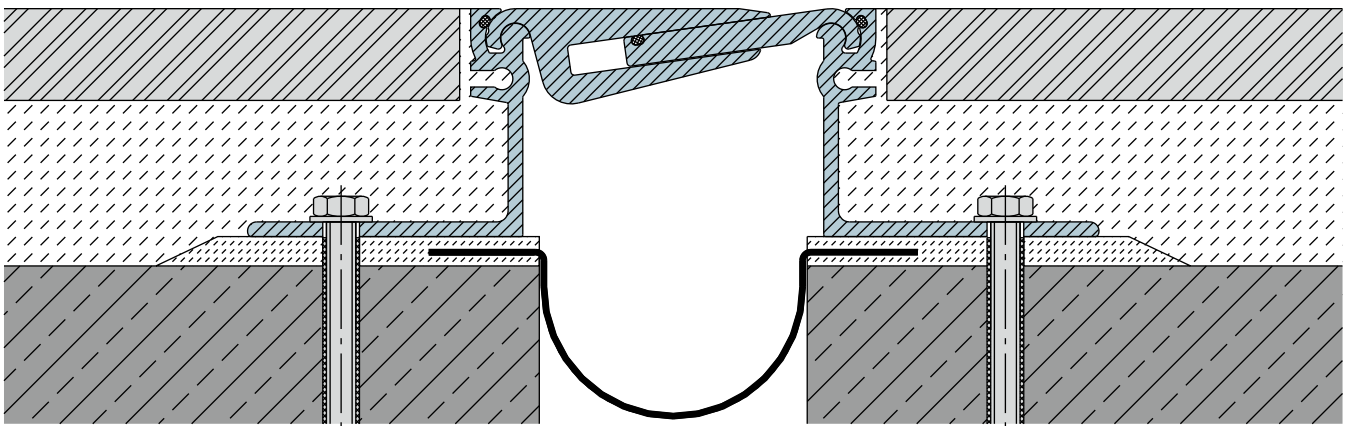


MIGUTRANS expansion joint construction with one-sided carry-over

## INSTALLATION SUGGESTIONS



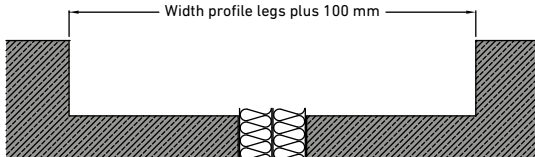
MIGUTRANS expansion joint construction FSRX with visible part that is exchangeable



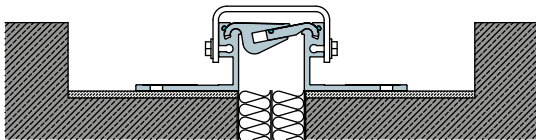
MIGUTRANS expansion joint construction with MIGUFOL tape

## INSTALLATION STEPS FSX-EXPANSION JOINTS USING THE EXAMPLE OF THE FSX 75

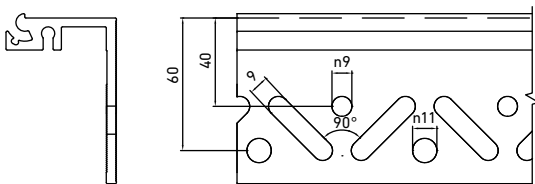
- 1** Cleaning and priming of the load bearing ground.



- 3** Cleaning, degreasing und priming - if necessary - of joint cover mounting brackets and levelling of the joint cover at the correct height into the still soft smoothing material. Pls adjust the thickness to the upper surface of the finished floor and coating - if applicable.



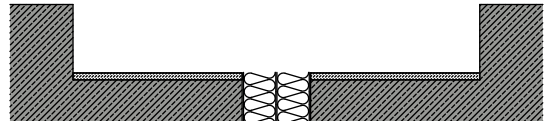
- 5** Mounting kann be effected through the holes or slots. Pls choose the furthest possible distance to the cover edge. When using compound anchors, the outer bor-hole is to be used.



- 7** Remove spacers immediately after dowelling of the covers.

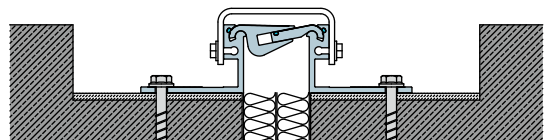


- 2** Application of leveling layer with a pressure-resistant mortar that does not shrink (e.g. PCC or epoxy resin mortar)

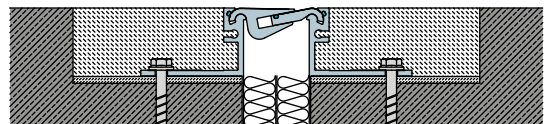


- 4** The joint covers have to be fully lined with no hollows. Pls make sure that mortar does not break into he joint while pushing in the joint covers. If necessary, let the joint cover filler plates protrude. Start with the mould-ed parts. Mounting brackets must not extend into the joint. Several joint cover lengths are to be linked with connection pins at the same level. Pls pay attention to the same optical alignment (arrows) of assymetric joint covers.

- 6** Double-sided anchoring immediately after the mortar has hardened with Heco MMS-plus SS 10x90 vz (or an alternativ anchor from our standard mouting list publishe on our website) with a 300 mm gap. When using countersunk screws, the holes in the mounting brackets must be countersunk, too.



- 8** Filling the cut-out to the expansion joint cover. Fill the joint gap up to the level of the upper surface minus possible coating. While choosing the appropriate filling material, please pay attention to the subsequent application. In any case, pls ensure that the upper edge of the neighboring surface has the same height as the upper edge of the cover.



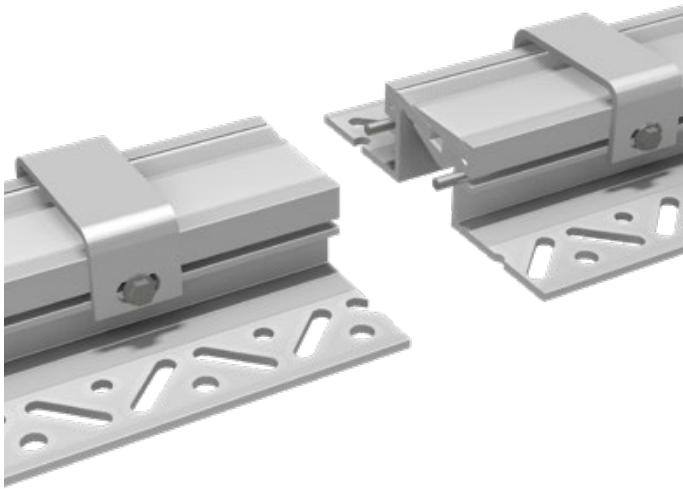
Given that qualitatively equivalent results are achieved otherwise, it is permitted to deviate from the described procedures. For more information please visit [migua.com](http://migua.com)

## JOINT CONNECTIONS

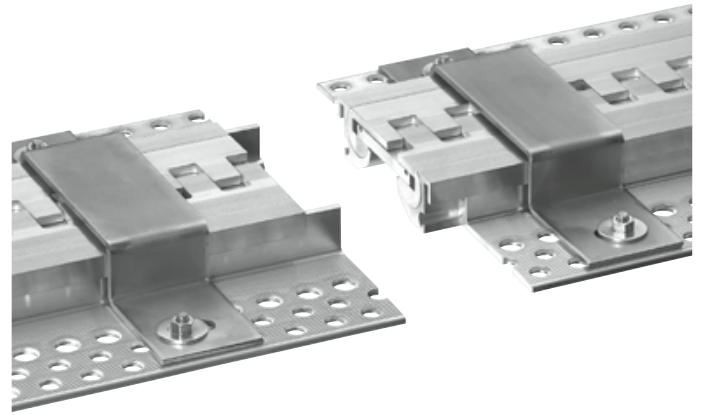
### EXAMPLES FS

In case of **one-piece joint cover constructions**, the joint cover lengths are connected at the same height and on the same side by means of **insertable connecting pins**.

With **multi-part joint cover constructions**, the connection is made by pushing the **connecting brackets into one another**.



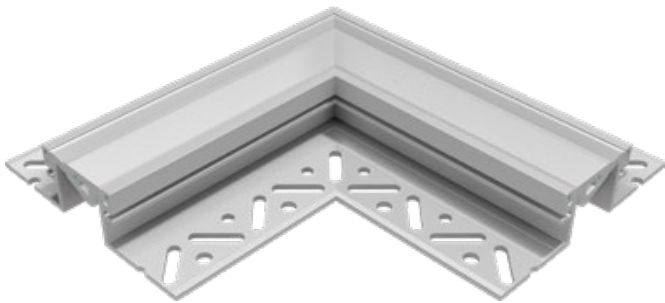
FS 75/42 (one-piece expansion joint construction)



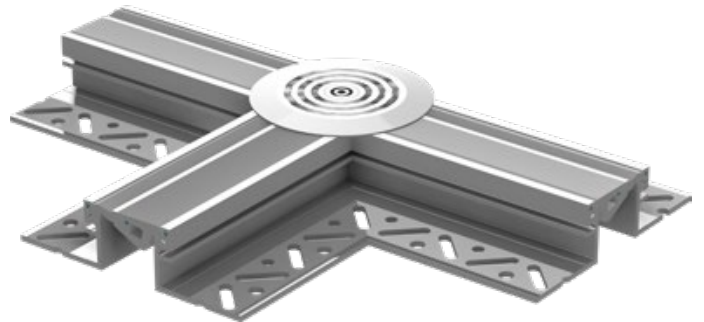
FS 100/30 (one-piece expansion joint construction)

## MOULDED PARTS

### EXAMPLES



Only asymmetrical joint covers require an additional plate at crossings or T-pieces. The direction of the groove bar and female multipoint connector can be freely selected for production.

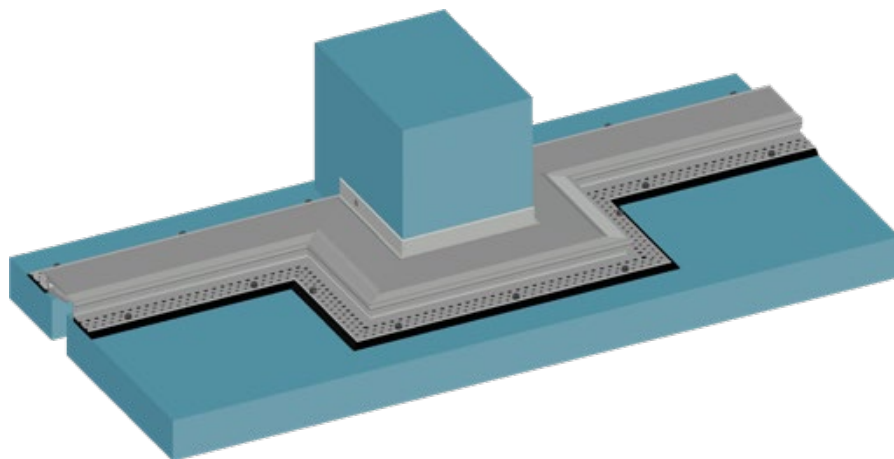
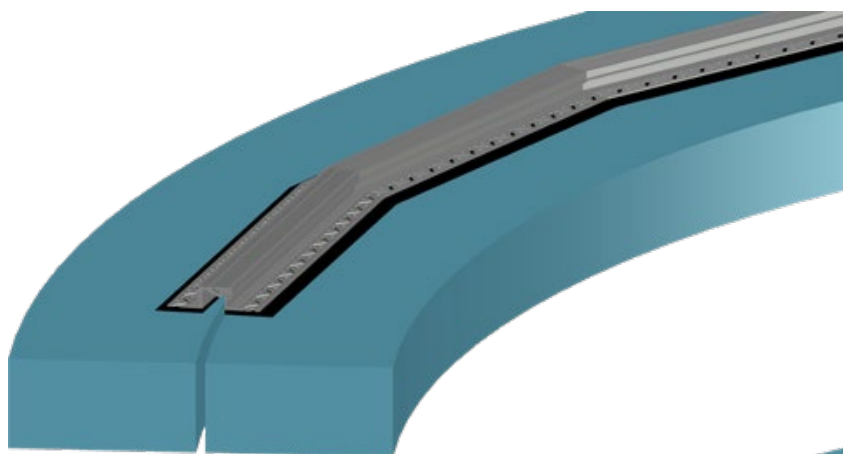
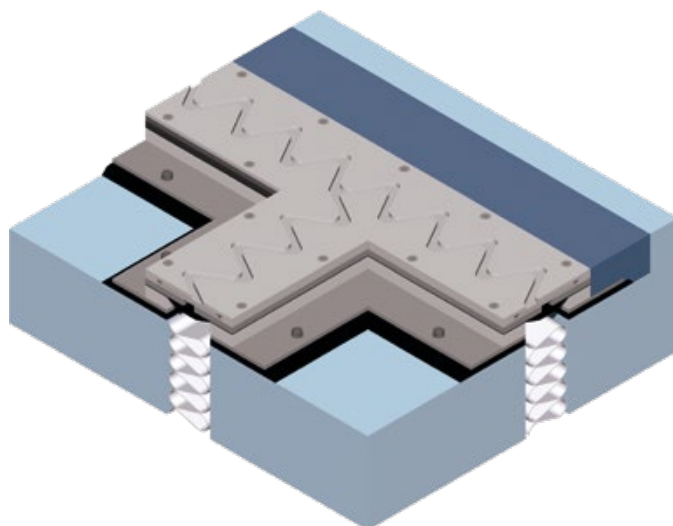
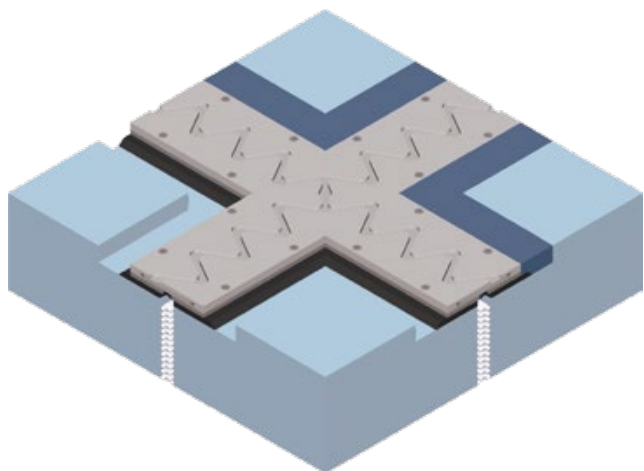


Further intersection variations are available on request

# MIGUTRANS

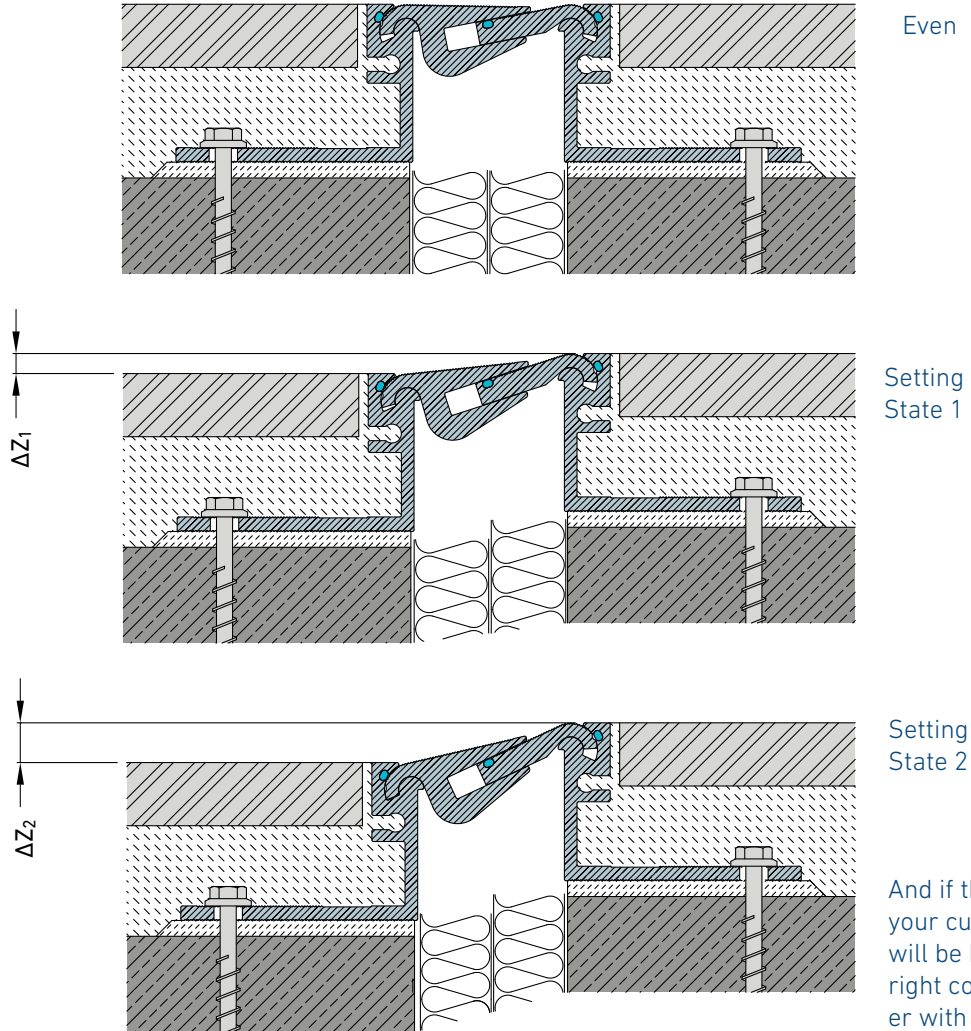
HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS

## MOULDED PARTS EXAMPLES

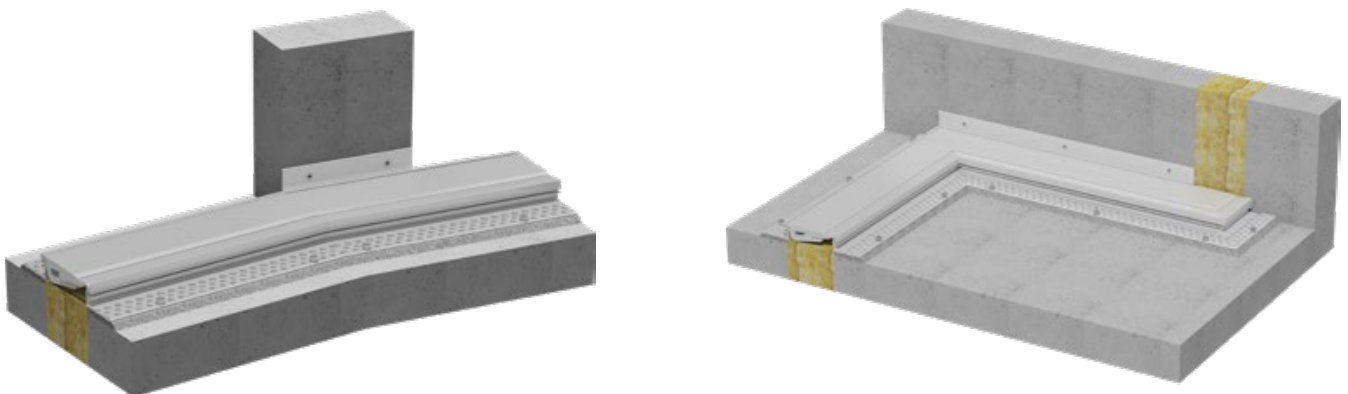




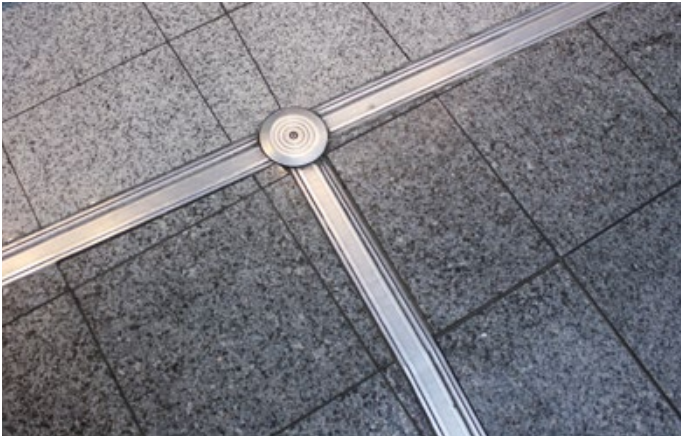
## RECORD OF THE SETTLEMENT AND VIBRATION ABSORPTION VIA SMART JOINT CONSTRUCTION



## INSTALLATION SUGGESTIONS CORNER SOLUTIONS



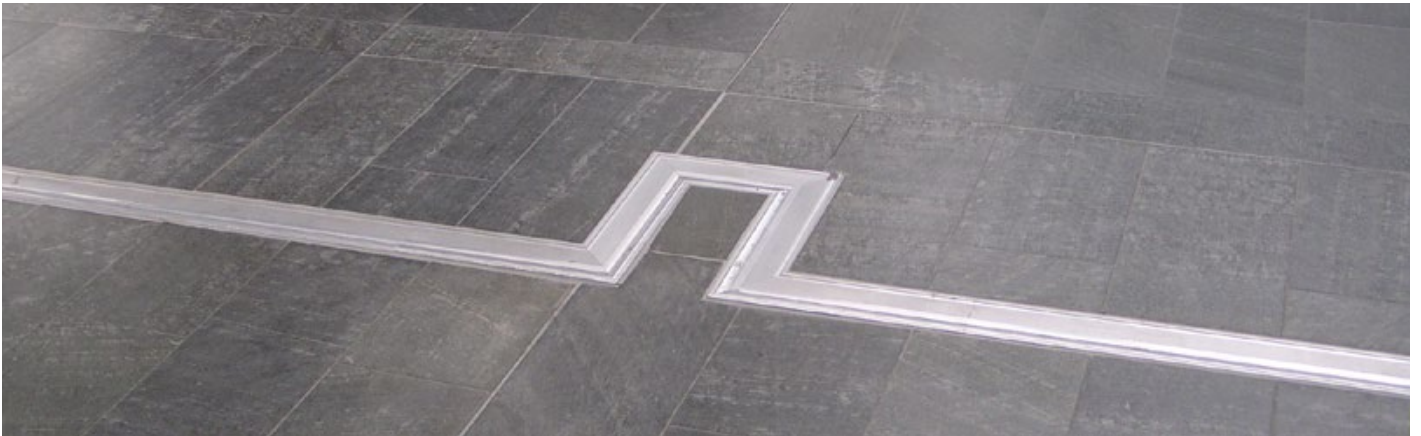
## PRACTICAL APPLICATIONS



Shopping mall, Goete gallery, Jena, Germany



Frankfurt airport



University Hospital Jena, Germany



Hamburg airport, underground

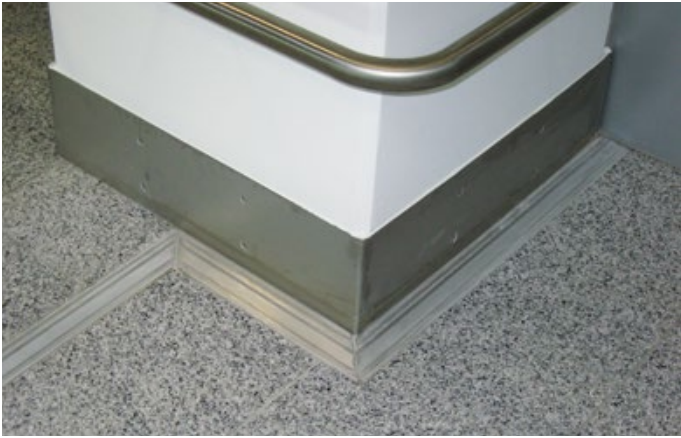


Emergency Hospital, Berlin, Germany



# MIGUTRANS

HEAVY-DUTY ALL-METAL JOINT SOLUTIONS FOR LARGE TRAFFIC LOADS



Frankfurt airport



Trade fair, Leipzig, Germany



Millennium Bridge, London, GB



City Centre Halle shopping centre



Commercial building, Neumarkt, Germany

## LEGAL NOTES

All specifications in this catalogue, in particular the suggestions for processing and use of our products correspond to our current knowledge state. Despite the greatest possible care, we are not able to guarantee that the non-binding information is without errors.

Further, the installation details shown in this catalogue are theoretical in nature and do not represent real objects. We reserve the right to make technical changes.

The current version, which can either be requested by us or downloaded from [www.migua.com](http://www.migua.com) applies.

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