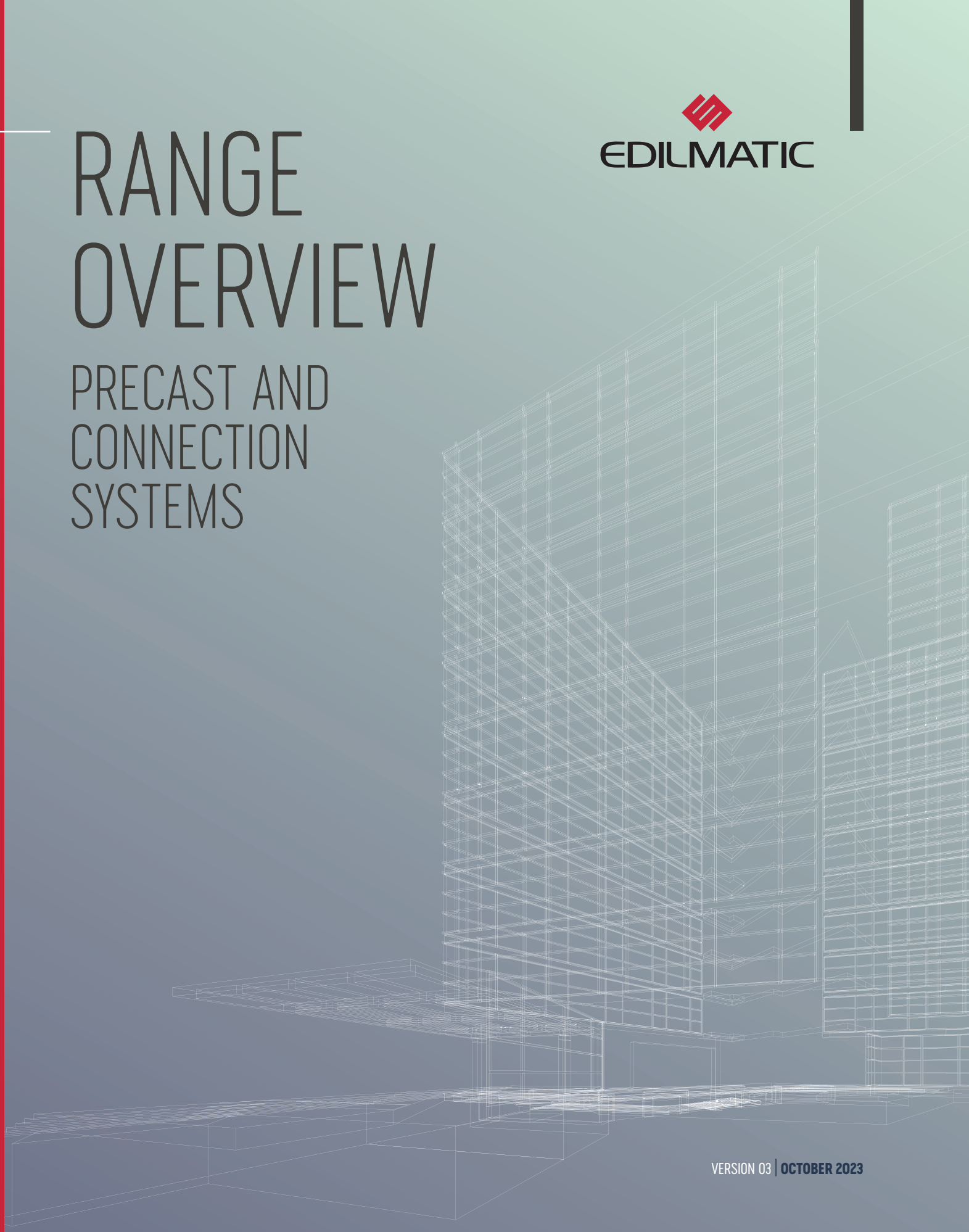
RANGE OVERVIEW

PRECAST AND CONNECTION SYSTEMS



VERSION 03 | **OCTOBER 2023**

EDILMATIC

EDILMATIC is an Italian company specialised in the development and the manufacturing of anchoring and connection systems to be used with a wide range of pre cast elements in the field of industrial building.
The Know-How collected through years of strict contact with our customers enabled us to become one of the market leaders in Italy, strengthening also our role in many other European countries.
Focus of our activity is to analyse deeply the market trends in order to offer cutting-edge solutions with unique properties. Our highly qualified technical department grants all tests needed to comply with ETA and ISO standards, as well as a precise and continuous check of the quality of the products, ensuring our customers always best performances and safety requirements.

KNOW-HOW and NETWORK

Sharing experiences and knowledge is key and EDILMATIC has always promoted a strict cooperation with all its partners to improve the quality of its activity.

TECHNICAL SUPPORTS

Our solutions come with fully detailed technical documentation as well as calculation models as a valid support for the designing engineers.

PROFESSIONAL CONSULTANCY

Our technical department is always at disposal of both our sales office and partners all over Europe providing fast and highly qualified training and support.

IN HOUSE TRAINING

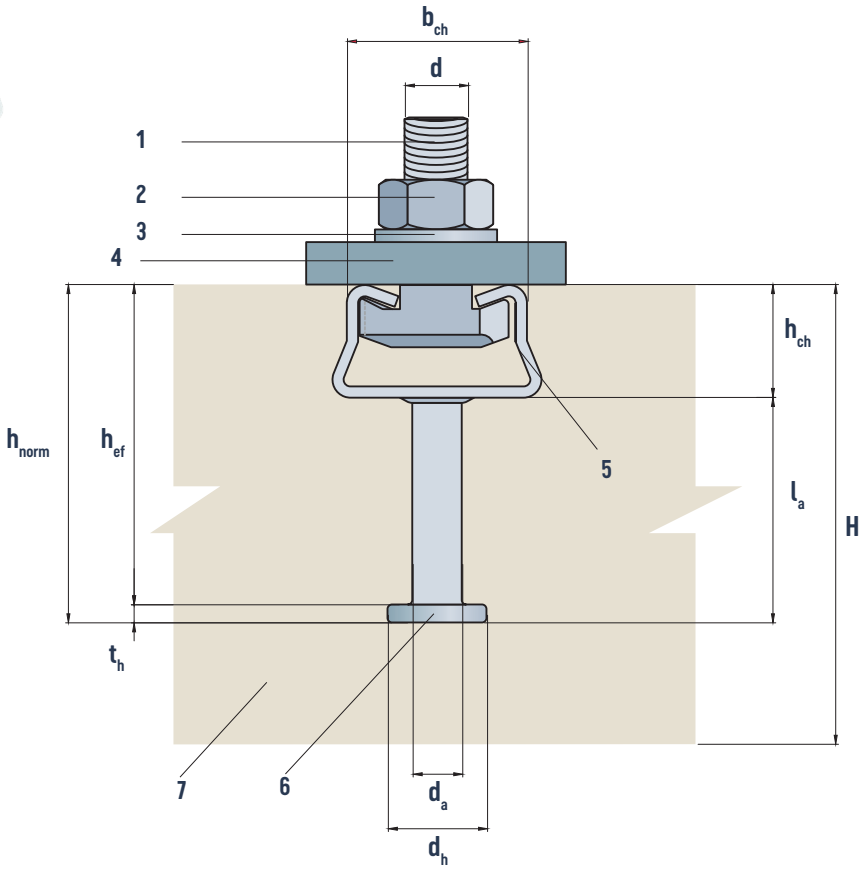
EDILMATIC opened in 2021 its new training centre to organise technical meetings with its customers and partners, and build up therefore a much stricter and professional cooperation.

CONTENTS

ANCHORING SYSTEMS

ANCHOR CHANNELS

CE
UNI EN 1090-1
ETA 16-0560



KEY:
1 Bolt
2 Nut
3 Washer
4 Counterplate
5 Anchor channel
6 Anchor
7 Concrete

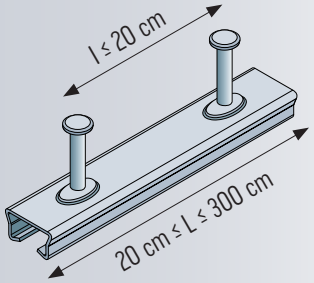
ANCHOR CHANNELS			GF	GI	GD	GE	GM
EFFECTIVE ANCHORING DEPTH	h_{ef}	[mm]	46.5	59.0	69.0	91.0	126.0
MINIMUM ANCHORS SPACING		[mm]	50.0	50.0	50.0	50.0	50.0
MAXIMUM ANCHORS SPACING		[mm]	200.0	200.0	200.0	200.0	200.0
MINIMUM PROFILE LENGTH	L_{min}	[mm]	200.0	200.0	200.0	200.0	200.0
MINIMUM EDGE DISTANCE	$c_{min,1}$	[mm]	60.0	60.0	100.0	100.0	100.0
	$c_{min,2}$	[mm]	40.0	40.0	80.0	80.0	100.0
MINIMUM THICKNESS OF CONCRETE	H_{min}	[mm]	100.0	100.0	150.0	150.0	200.0

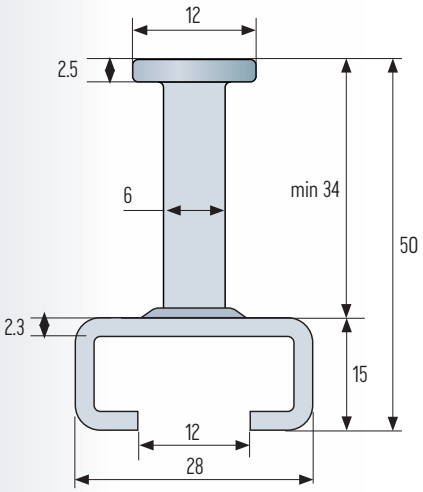
ANCHORING MODELS – LIGHT LOAD GROUPS

GF 28x15x2,3 mm

Capacity load:
N_{Rd} = V_{Rd} = 4.9 kN

GALVANISATION available in:
Hot dip galvanized (Sendzimir method)
Hot dip galvanized
Raw
Stainless Steel AISI 304

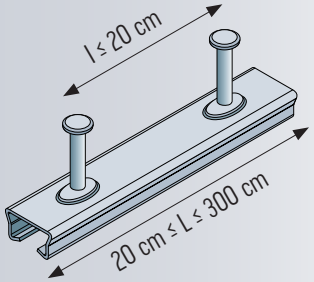


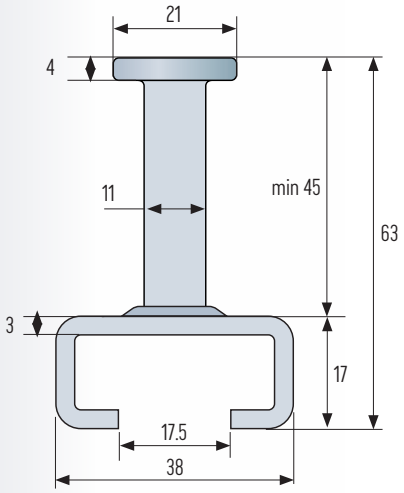


GI 38x17x3.0 mm

Capacity load:
N_{Rd} = V_{Rd} = 10.7 kN

GALVANISATION available in:
Hot dip galvanized (Sendzimir method)
Hot dip galvanized
Raw
Stainless Steel AISI 304



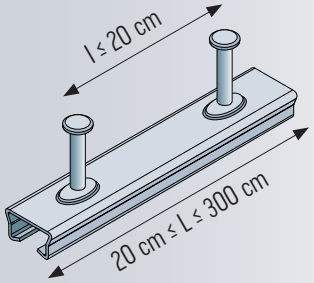


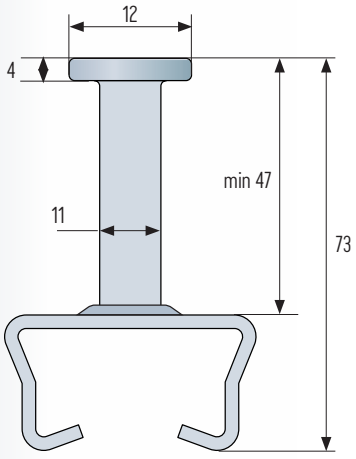
ANCHORING MODELS – MEDIUM LENGTH PIECES

GD 40x25x2,5 mm

Capacity load:
N_{Rd} = V_{Rd} = 10.7 kN

GALVANISATION available in:
Hot dip galvanized (Sendzimir method)
Hot dip galvanized
Raw
Stainless Steel AISI 304



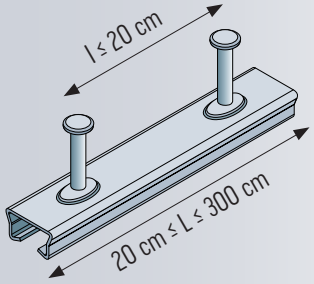


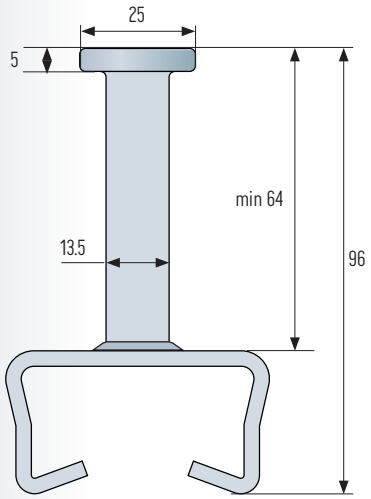
ANCHORING MODELS - HEAVY LOAD GROUPS

GE 52x30x3.3 mm

Capacity load:
N_{Rd} = V_{Rd} = 17.5 kN

GALVANISATION available in:
Hot dip galvanized (Sendzimir method)
Hot dip galvanized
Raw
Stainless Steel AISI 304

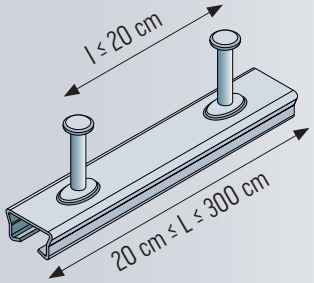


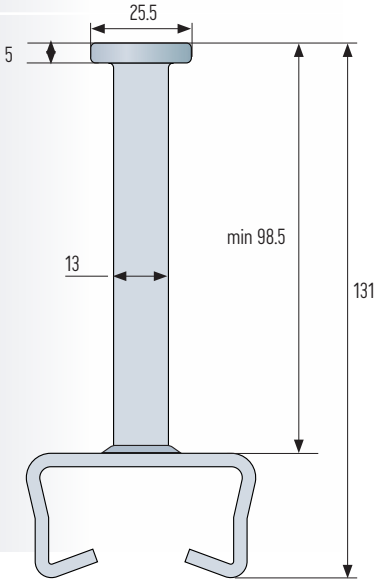


GM 52x31x4 mm

Capacity load:
N_{Rd} = V_{Rd} = 26.6 kN

GALVANISATION available in:
Hot dip galvanized (Sendzimir method)
Hot dip galvanized
Raw
Stainless Steel AISI 304





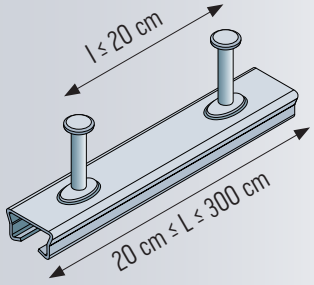
NEW ANCHOR CHANNEL WITH THINNER THICKNESS

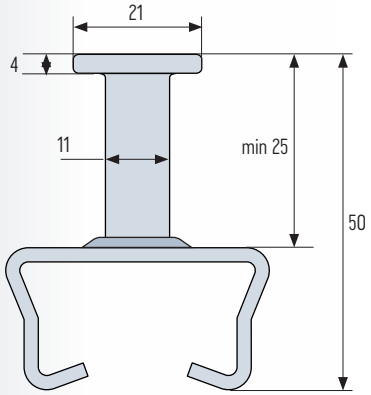
GD-R 40x25x2,5 mm

Capacity load:
N_{Rd} = V_{Rd} = 7.0 kN

GALVANISATION available in:
Hot dip galvanized
(Sendzimir method)
Hot dip galvanized
Raw
Stainless Steel AISI 304

CE
UNI EN
1090-1:2011



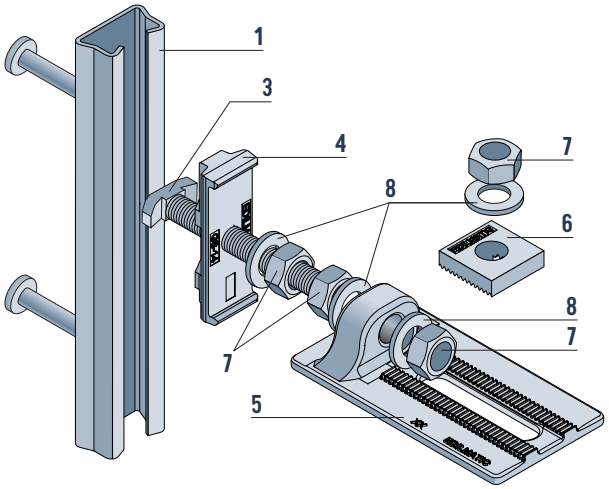


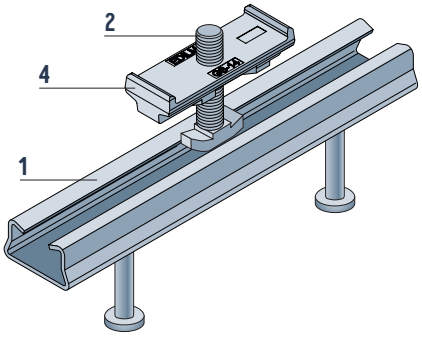
ANCHORING SYSTEMS ANCHOR CHANNELS

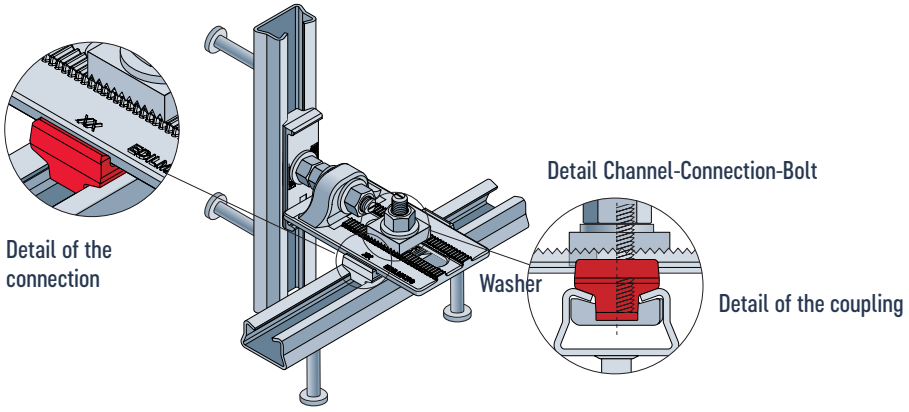
ANTISEISMIC CONNECTION EDIL-S

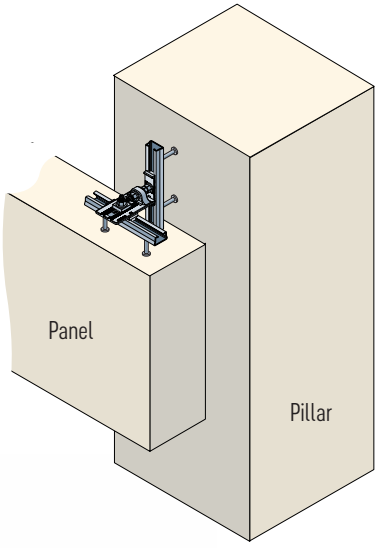
CE
UNI EN 1090-1
ETA 16-0560

COMPONENTS:
1 Anchor channel
2-3 Bolt TAG1 or TAG2
4 Joint GS
5 Edil-S Plate
6 Toothed Plate
7 Six-sided nut
8 Flat Plates







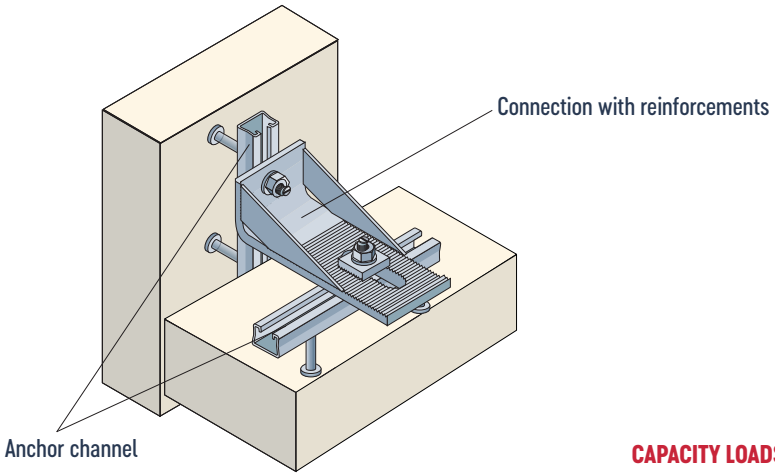


Components			
Pos.	**n.**	**Joint with Anchor GS**	**Joint with Anchor GE-GM**
1	2	Anchor channel GD	Anchor channel GE-GM
2	1	Bolt TAG1 M16x50	Bolt TAG2 M16x50
3	1	Bolt TAG1 M16x80	Bolt TAG2 M16x80
4	2	GS16-GD	Joint GS 16
5	1	Washer EDIL-S	Washer EDIL-S
6	1	Toothed Washer 38x38	Toothed Washer 38x38
7	4	Six-sided Nut M16	Six-sided Nut M16
8	4	Flat Washer d=16	Flat Washer d=16

ANCHORING SYSTEMS

CORNER PLATES

CE
UNI EN
1090-1:2011



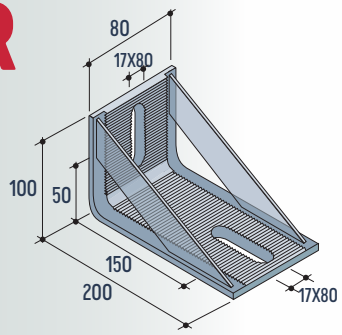
CAPACITY LOADS

CONNECTION TYPES	Design Capacity N_{Rd}
With reinforcements	Same as Anchor channel

WITH REINFORCEMENTS

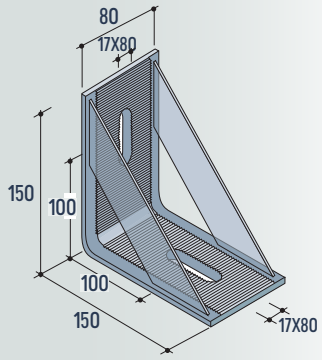
EDIL1-R

CP 38x38



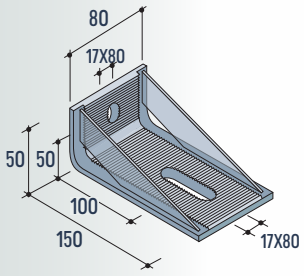
EDIL2-R

CP 38x38



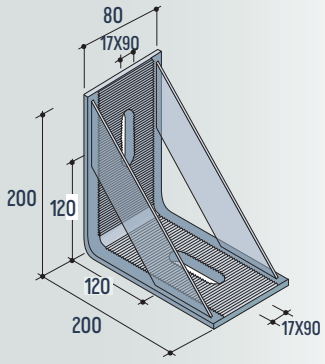
EDIL3-R

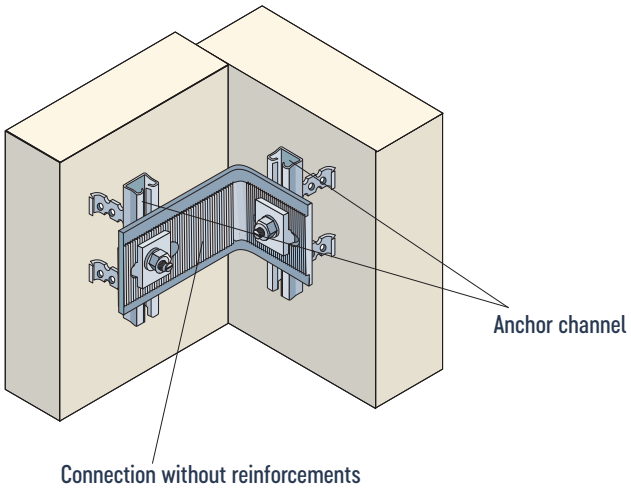
CP 38x38



EDIL4-R

CP 38x38





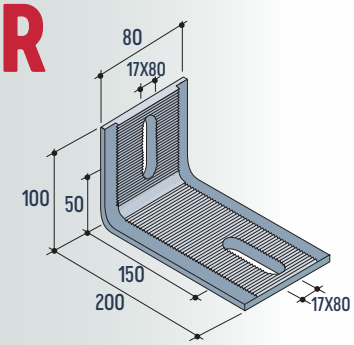
CAPACITY LOADS

CONNECTION TYPES	Design Capacity N_{Rd}
Without reinforcements	4.0 kN

WITHOUT REINFORCEMENTS

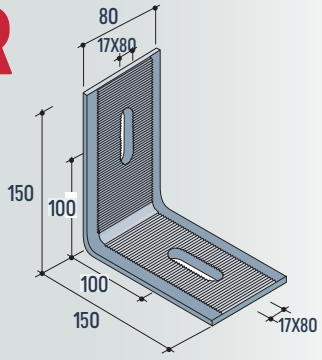
EDIL1-SR

CP 38x38



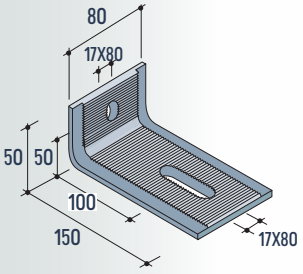
EDIL2-SR

CP 38x38



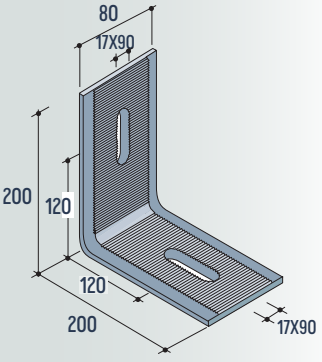
EDIL3-SR

CP 38x38



EDIL4-SR

CP 38x38



ANCHORING SYSTEMS

ANCHOR HEAD CONNECTION

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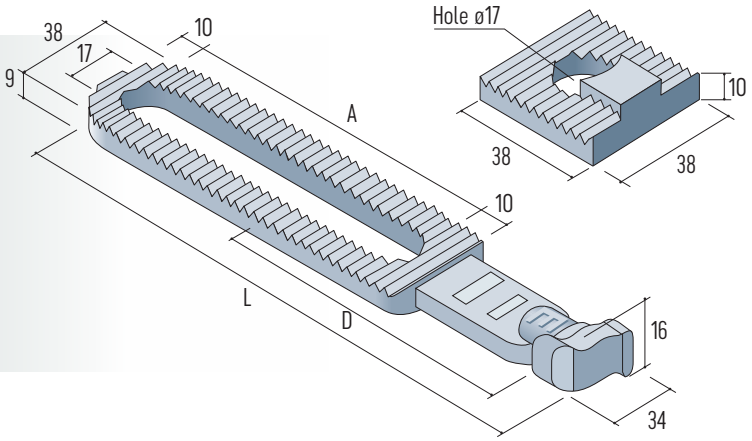
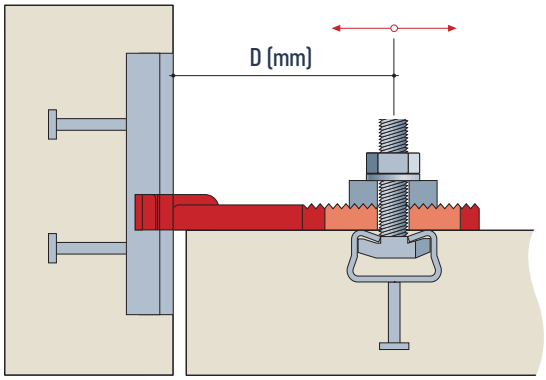
ANCHOR HEAD CONNECTION for **ANCHOR CHANNEL GD 40/25**



DIMENSIONS

TYPE		Size D	Size A
L = 100 mm	[mm]	50	50
L = 150 mm	[mm]	85	90
L = 200 mm	[mm]	125	120
L = 250 mm	[mm]	170	120



ADAPTATION SIZES

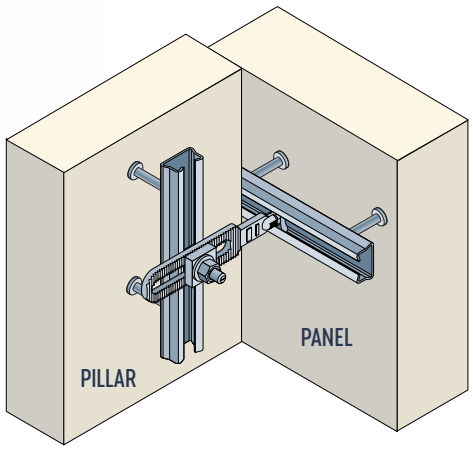
Distance of anchoring and adaptation

BOLT TAG1

Plate TYPE L		Anchoring distance D		
		D	D Min.	D Max.
L = 100 mm	[mm]	50	32	68
L = 150 mm	[mm]	85	48	120
L = 200 mm	[mm]	125	68	170
L = 250 mm	[mm]	170	118	220

Used LOAD GROUPS and combinations

	Anchor channel in the BEARING ELEMENT	Anchor channel in the SUSTAINED ELEMENT	Project resistance N_{Rd}
Bolt TAG1	TYPE GD	TYPE GD	10.7 kN



ANCHORING SYSTEMS

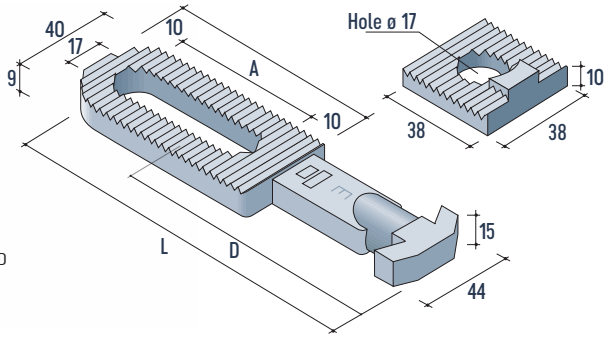
ANCHOR HEAD CONNECTION

CE
UNI EN 1090-1:2011

ANCHOR HEAD CONNECTION for **ANCHOR CHANNEL GE 52/30 - GM 52/31**

DIMENSIONS

TYPE		Size D	Size A
L = 185 mm	[mm]	110	100
L = 200 mm	[mm]	130	100
L = 250 mm	[mm]	170	120
L = 300 mm	[mm]	220	120



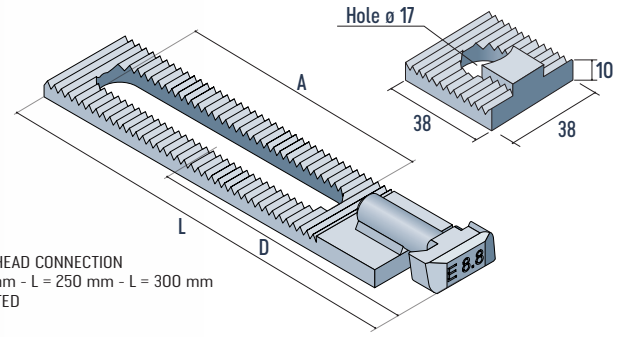
L = 185 mm
ZINC-PLATED

ADAPTATION SIZES

Distance of anchoring and adaptation

BOLT TAG2

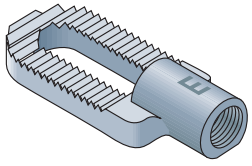
Plate TYPE L		Anchoring distance D		
		D	D Min.	D Max.
L = 185 mm	[mm]	110	70	150
L = 200 mm	[mm]	130	80	170
L = 250 mm	[mm]	170	110	220
L = 300 mm	[mm]	220	160	270



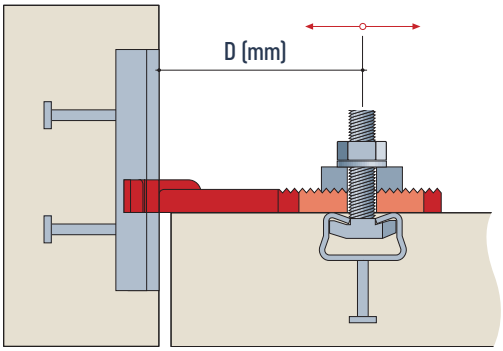
ANCHOR HEAD CONNECTION
L = 200 mm - L = 250 mm - L = 300 mm
ZINC-PLATED

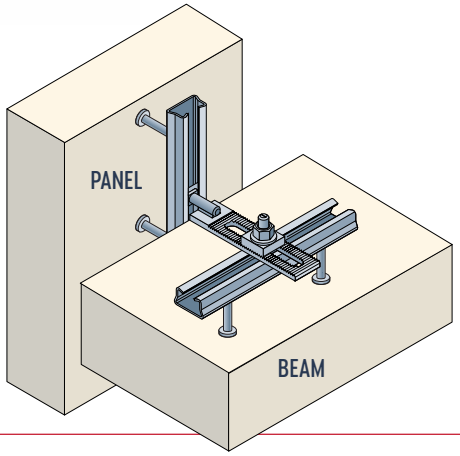
Used LOAD GROUPS and combinations

	Anchor channel in the BEARING ELEMENT	Anchor channel in the SUSTAINED ELEMENT	Project resistance N_{Rd}
Bolt TAG2	TYPE GE	TYPE GE	17.5
Bolt TAG2	TYPE GM	TYPE GM	26.6



ANCHOR HEAD CONNECTION
M12 - M14 - M16
L = 100 mm
ZINC-PLATED

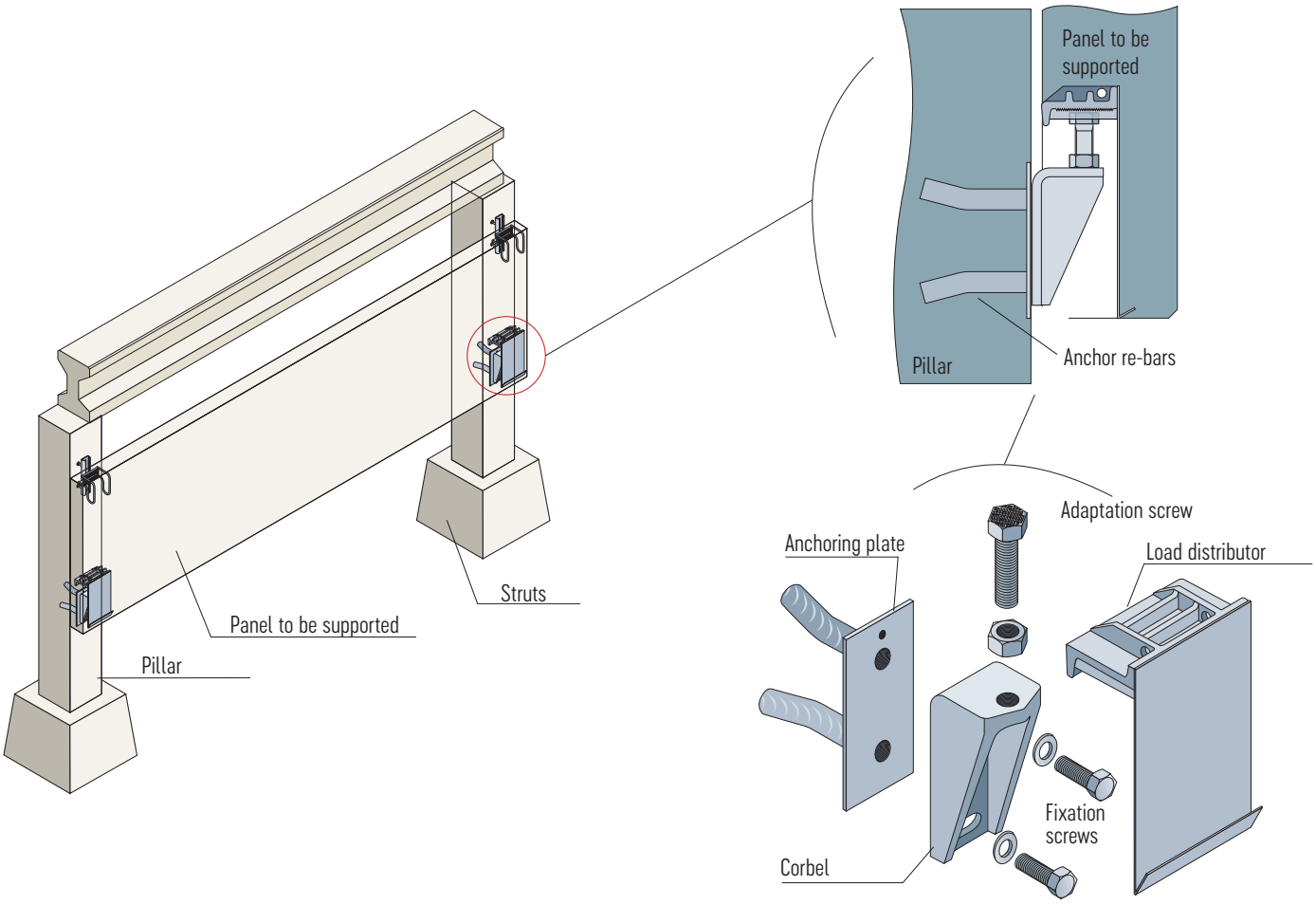




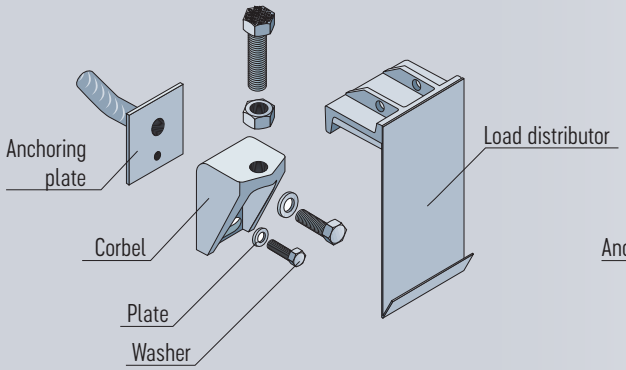
SUPPORT BRACKETS

MT VERTICAL BRACKET

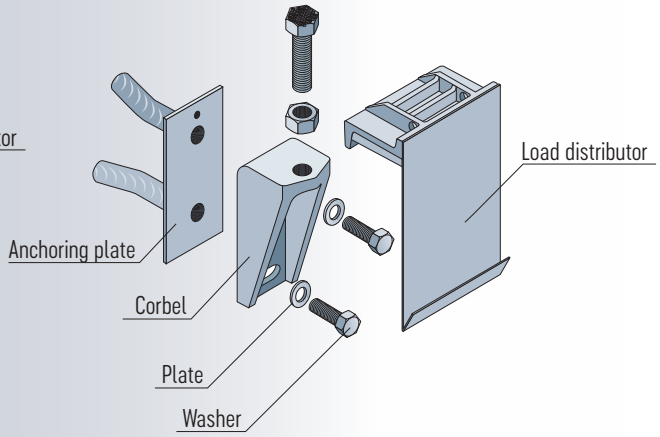
CE
UNI EN 1090



MT2



MT4-6-9-12

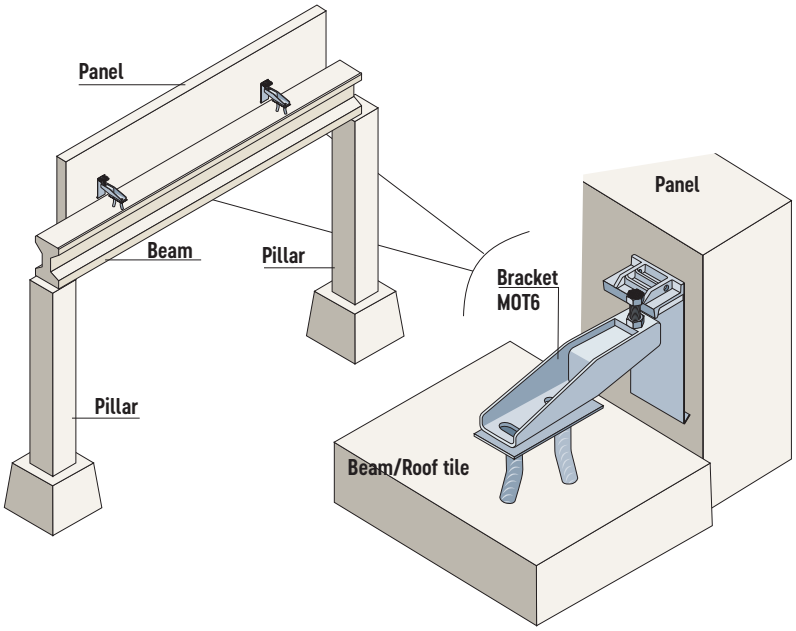


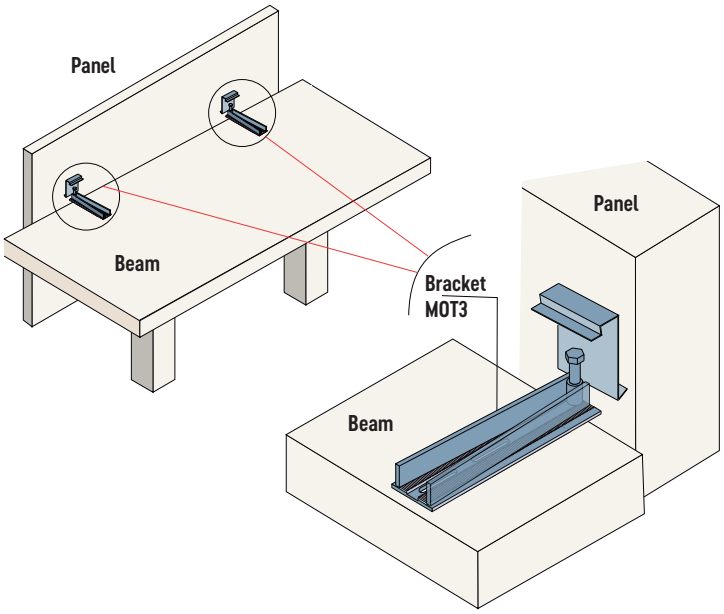
TYPE	Maximum load	Installation screw and nut	Fixation bolts and washer
MT2	**20 kN**	M18 Class 8.8 Washer M18 Class 6s	M16 Class 10.9 Washer ø 16 Class R40
MT4	**40 kN**	M20 Class 8.8 Washer M20 Class 6s	M16 Class 10.9 Washer ø 16 Class R40
MT6	**60 kN**	M24 Class 8.8 Washer M24 Class 6s	M18 Class 10.9 Washer ø 18 Class R40
MT9	**90 kN**	M27 Class 8.8 Washer M27 Class 6s	M20 Class 10.9 Washer ø 20 Class R40
MT12	**120 kN**	M27 Class 8.8 Washer M27 Class 6s	M24 Class 10.9 Washer ø 24 Class R40

SUPPORT BRACKETS

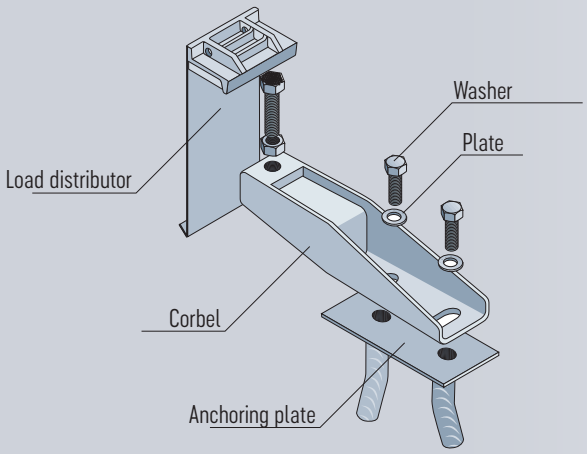
MT HORIZONTAL BRACKET

CE
UNI EN 1090

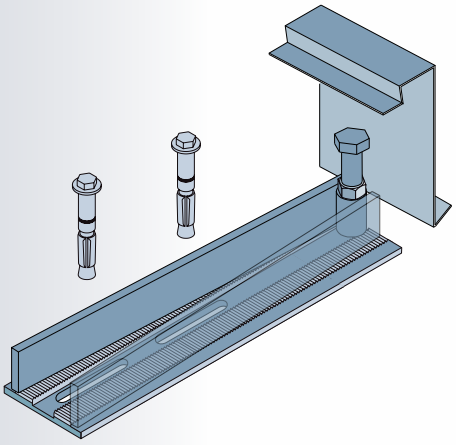




MOT6



MOT3



TYPE	Maximum load	Installation bolt and nut	Fixation bolts and washer
MOT6	60 kN	M24 Class 8.8 Washer M24 Class 6s	M16 Class 10.9 Washer ø 18 Class R40
MOT3	30 kN	M18 Class 8.8 Washer M18 Class 6s	M16 Class 10.9 Washer ø 16 Class R40

RETAINING BOXES

ST-BOXES

CE
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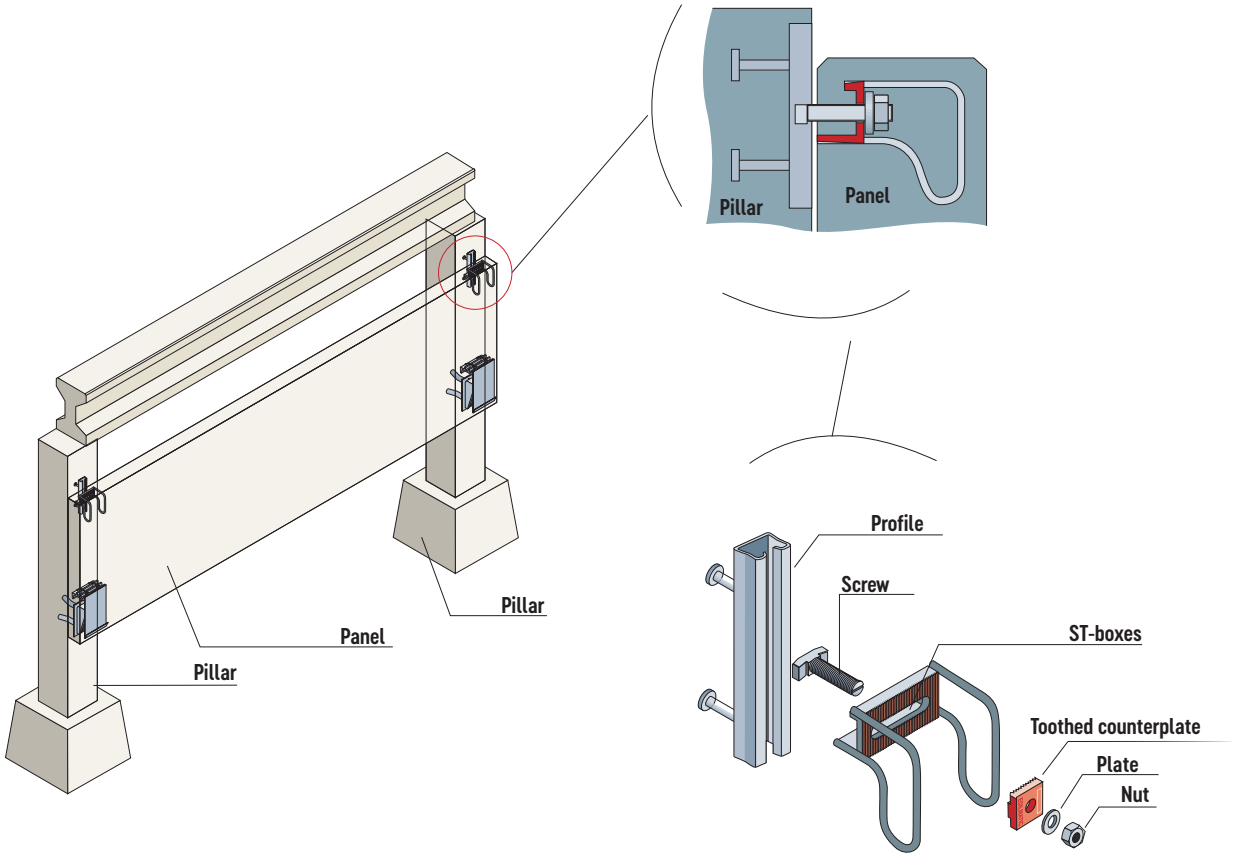
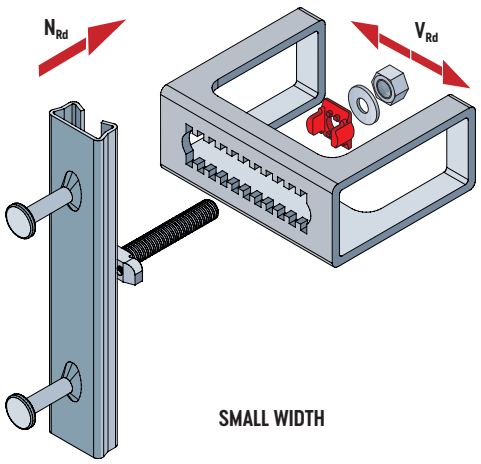
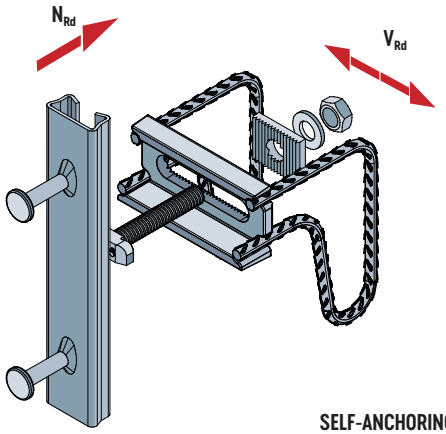




SMALL WIDTH

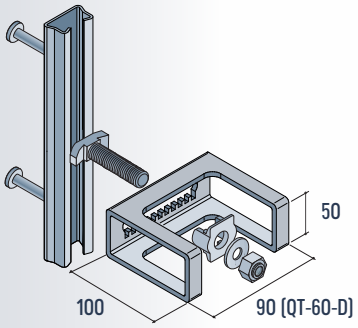


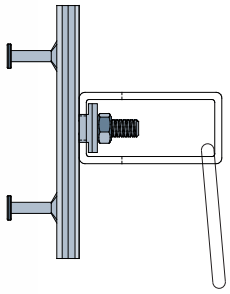
SELF-ANCHORING

QT-60-D

Width: **90 mm**
Hole: **60 mm**

ANCHOR CHANNELS	N_{Rd}	V_{Rd}
GD	10.7 kN	5.4 kN
GE	17.5 kN	8.7 kN
GM	26.6 kN	13.3 kN

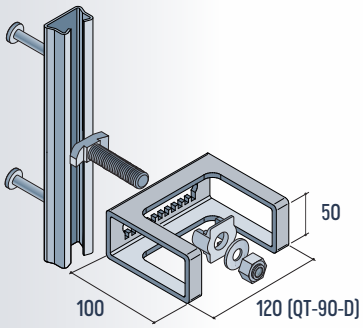


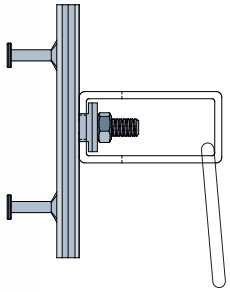


QT-90-D

Width: **120 mm**
Hole: **90 mm**

ANCHOR CHANNELS	N_{Rd}	V_{Rd}
GD	10.7 kN	10.7 kN
GE	17.5 kN	17.5 kN
GM	26.6 kN	13.3 kN

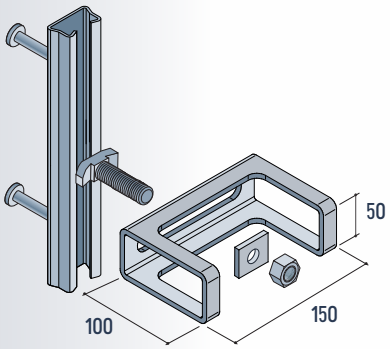


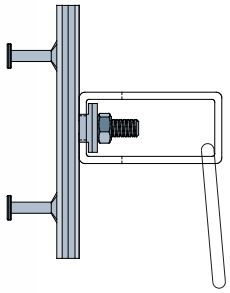


QT-120

Width: **150 mm**
Hole: **120 mm**

ANCHOR CHANNELS	N_{Rd}
GD	10.7 kN
GE	17.5 kN
GM	26.6 kN

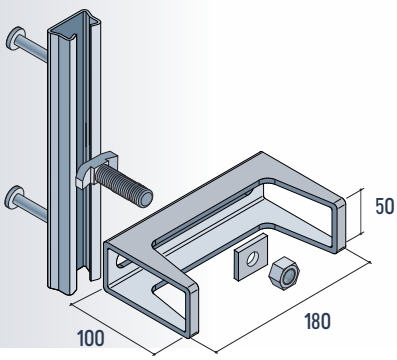


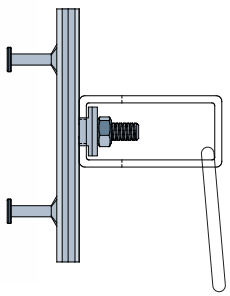


QT-160

Width: **180 mm**
Hole: **160 mm**

ANCHOR CHANNELS	N_{Rd}
GD	10.7 kN
GE	17.5 kN
GM	26.6 kN



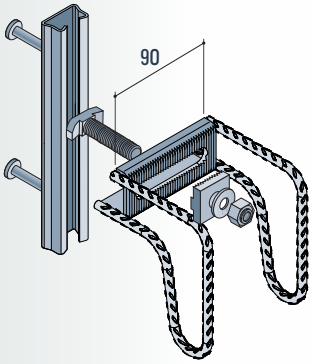


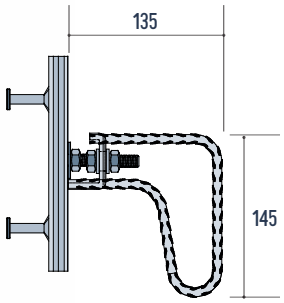
ST-BOXES (ONLY ON DEMAND)

ST60Z

Hole: 60 mm

ANCHOR CHANNELS	N_{Rd}	V_{Rd}
GD	10.7 kN	10.7 kN
GE	17.5 kN	17.5 kN
GM	26.6 kN	26.6 kN

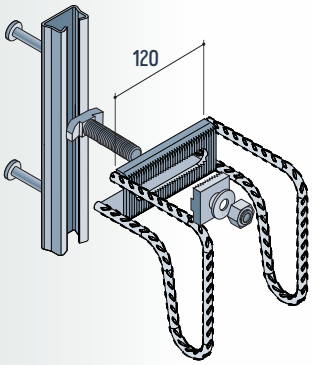


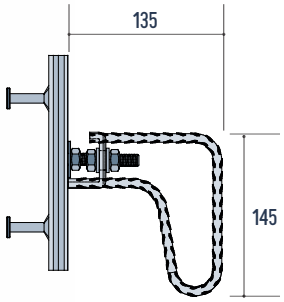


ST90Z

Hole: 90 mm

ANCHOR CHANNELS	N_{Rd}	V_{Rd}
GD	10.7 kN	10.7 kN
GE	17.5 kN	17.5 kN
GM	26.6 kN	13.3 kN

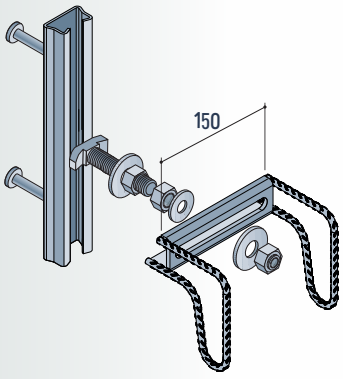


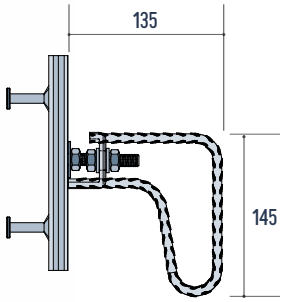


ST120

Hole: 120 mm

ANCHOR CHANNELS	N_{Rd}	V_{Rd}
GD	10.7 kN	10.7 kN
GE	17.5 kN	17.5 kN
GM	26.6 kN	13.3 kN

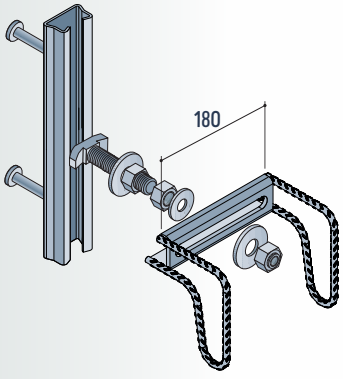


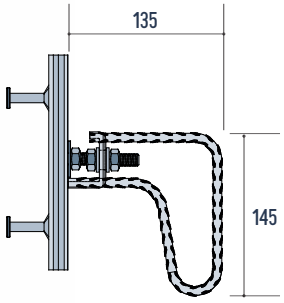


ST160

Hole: 160 mm

ANCHOR CHANNELS	N_{Rd}	V_{Rd}
GD	10.7 kN	10.7 kN
GE	17.5 kN	17.5 kN
GM	26.6 kN	13.3 kN





SANDWICH PANELS ANCHORING SYSTEMS

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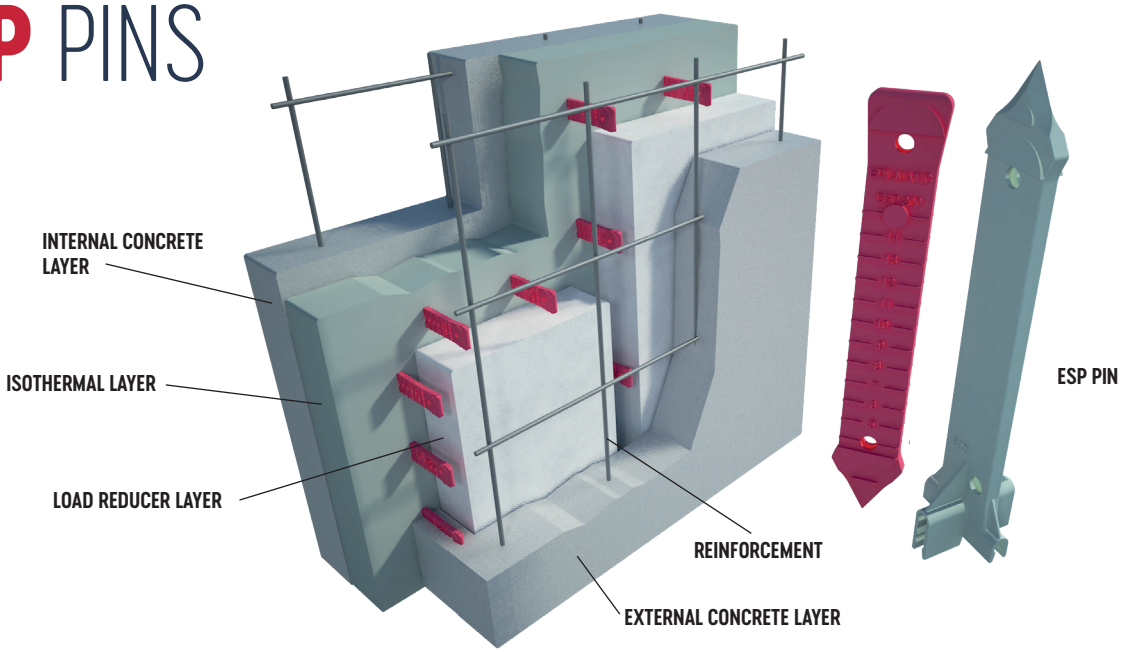
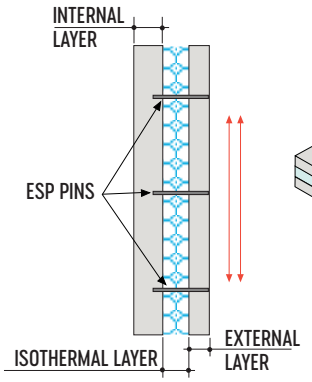
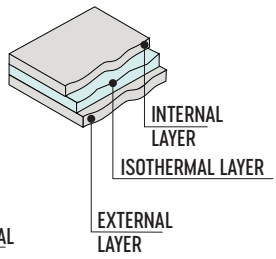
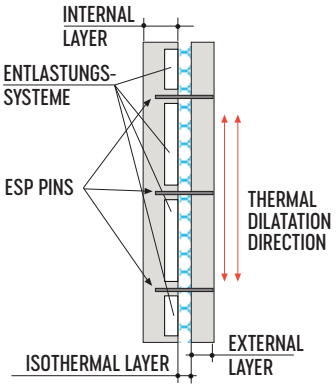
SANDWICH PANELS

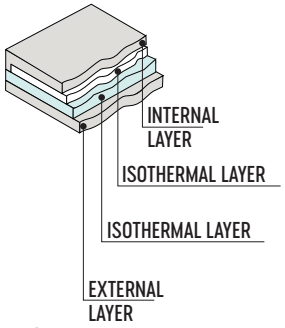
ESP PINS



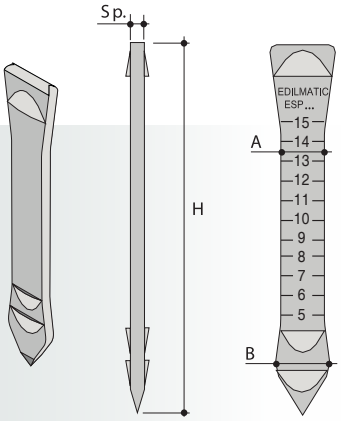








PIN		A	B	Sp	H	Isolation capacity
ESP 180	mm	28	34	7	180	2-6 cm
ESP 200	mm	28	34	7	200	6-8 cm
ESP 260	mm	41	47	10	260	8-15 cm
ESP 320	mm	41	47	10	320	>15 cm

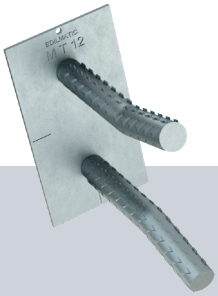


TEMPORARY COLUMN FIXING

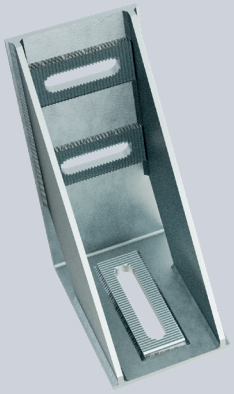
EFT SYSTEM

The **EDILMATIC EFT** system is a rational safe and simple solution for a temporary fixing during the necessary correct plumbing of pre-cast columns as well as other pre-cast elements.
The system allows to fix the pre-cast column to the foundation while the rest of the concrete is poured, avoiding additional prop-up systems.

Each connection is composed of:
- Column side insert – standard Edilmatic anchoring plate;
- Foundation side insert (bolt), constituted by a standard rebar;
- Reusable **EFT** bracket element;
- Fixing bolts and accessories, reusable.



ANCHORING PLATE



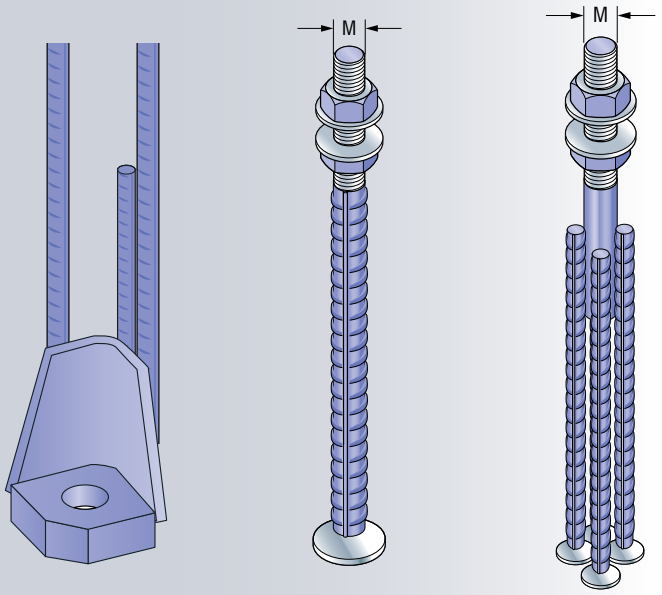
EFT BRACKET

EFT SYSTEM

ANCHORING SYSTEMS

EDILMATIC EPF PILLAR - FOUNDATION CONNECTIONS SYSTEM

The **COLUMN SHOES EDILMATIC ESC** and the **FOUNDATION ANCHOR EDILMATIC ETF** are system for a fast and secure connection of precast pillars and the foundation.



Thread	Column Shoe	Foundation Anchor	ULS Design Resistance NRd [kN]
M 16	ESC 16	ETF 16-G1K	62.2
M 20	ESC 20	ETF 20-G1K	97.0
M 24	ESC 24	ETF 24-G1K	139.4
M 30	ESC 30-1	ETF 30-G1K	222.2
M 30	ESC 30-2	ETF 30-G4K	299.2
M 36	ESC 36	ETF 36-G4K	435.7
M 39	ESC 39-1	ETF 39-G1K	386.5
M 39	ESC 39-2	ETF 39-G4K	520.5
M 45	ESC 45	ETF 45-G4K	696.5
M 52	ESC 52	ETF 52-G4K	937.6

LIFTING SYSTEMS

EMP - EMPL - EMPZ

CE
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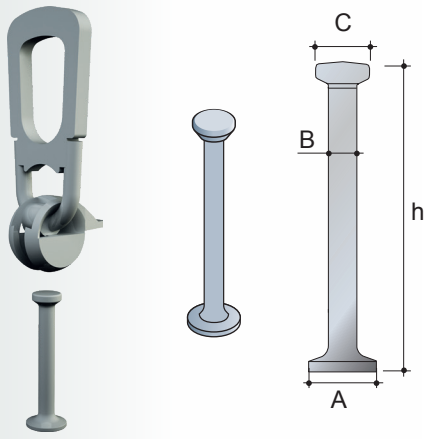
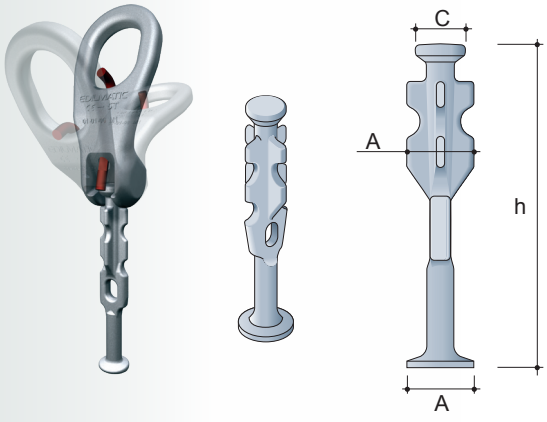
SPHERICAL HEADS

CAPACITY LOAD		A	B	C	h
1.3 ton	mm	25	10	19	120 - 170 - 240
2.5 ton	mm	35	14	26	120 - 170 - 280
5.0 ton	mm	50	20	36	240 - 340 - 480
7.5 ton	mm	60	24	46	200 - 300 - 540
10 ton	mm	70	28	46	170 - 340 - 680



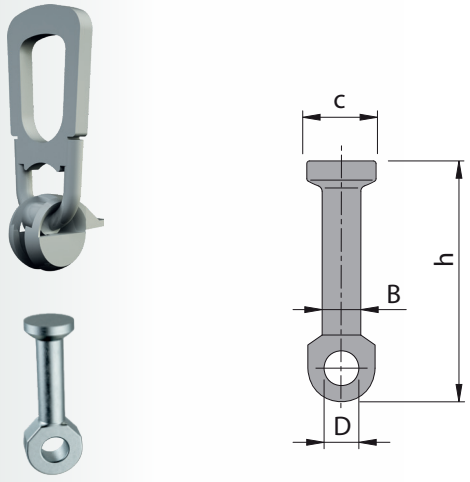
LIFTING SYSTEMS WITH REINFORCED ANCHORS

CAPACITY LOAD		A	C	h
2.5 ton	mm	28	26	180
5.0 ton	mm	40	37	240
7.5 ton	mm	50	46	300
10 ton	mm	55	46	350



LIFTING SYSTEMS WITH HOLE

CAPACITY LOAD		B	C	C	h
1.3 ton	mm	10	19	10	65
2.5 ton	mm	14	26	13	90
5.0 ton	mm	20	36	20	120
10 ton	mm	28	46	25	180
20 ton	mm	39	46	37	250



LIFTING SYSTEMS

ANCHORS AND SOCKETS

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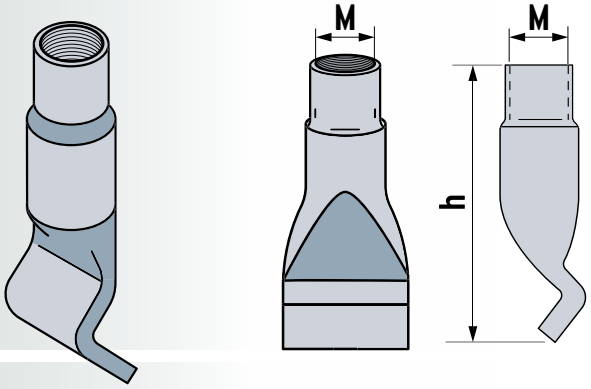
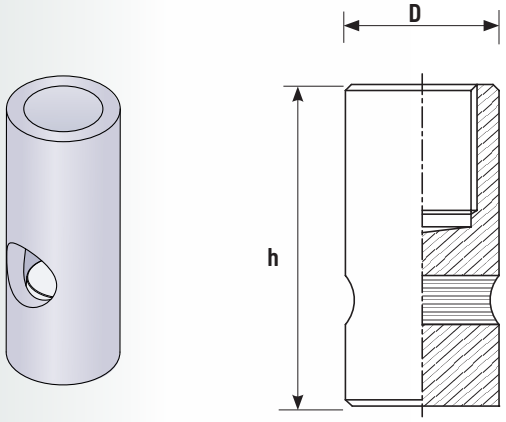
LIFTING SOCKET WAVED

CAPACITY LOAD	THREAD		h
0.5 ton	M12	mm	80
1.0 ton	M16	mm	80
1.25 ton	M20	mm	100
1.5 ton	M24	mm	120



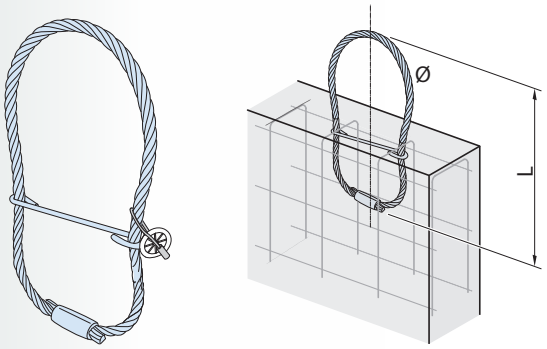
LIFTING SYSTEMS WITH SOCKETS

CAPACITY LOAD	THREAD		D	h
0.5 ton	M12	mm	15	40
0.8 ton	M14	mm	18	47
1.2 ton	M16	mm	21	54
1.6 ton	M18	mm	24	65
2.0 ton	M20	mm	27	69
2.5 ton	M24	mm	31	78
4.0 ton	M30	mm	40	103
6.3 ton	M36	mm	47	125
8.0 ton	M42	mm	54	145
12.5 ton	M52	mm	67	195



LOOP LIFTING SYSTEMS

CAPACITY LOAD		ø	L
0.8 ton	mm	6	205
1.2 ton	mm	7	320
1.6 ton	mm	8	250
2.0 ton	mm	9	300
2.5 ton	mm	10	325
4.0 ton	mm	12	370
6.3 ton	mm	16	425
8.0 ton	mm	18	480
10.0 ton	mm	20	525
12.5 ton	mm	22	590



LIFTING SYSTEMS

ANCHORS AND SOCKETS

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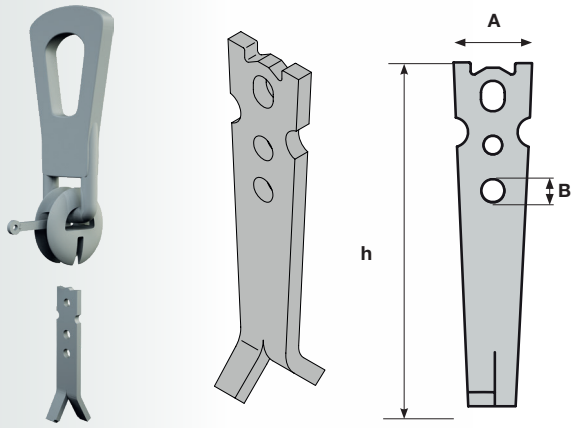
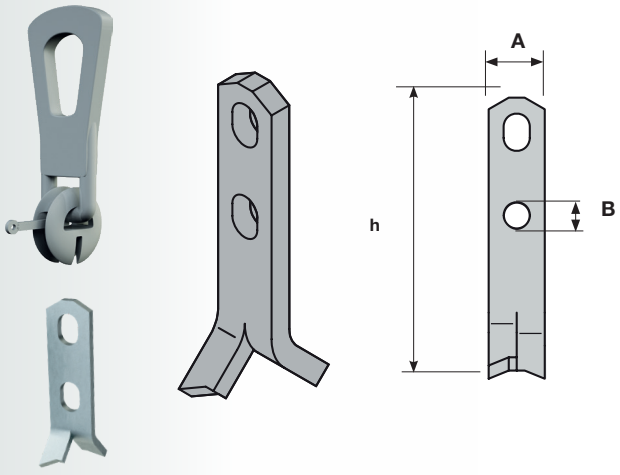
DOUBLE SHOULDER SPREAD ANCHOR

LOAD GROUP	LOAD CAPACITY		A	B	h
2.5 ton	2.5 ton	mm	55	12	230
5.0 ton	5.0 ton	mm	75	17.5	290
10.0 ton	7.5 ton	mm	120	15	320
	10 ton	mm	120	20	390



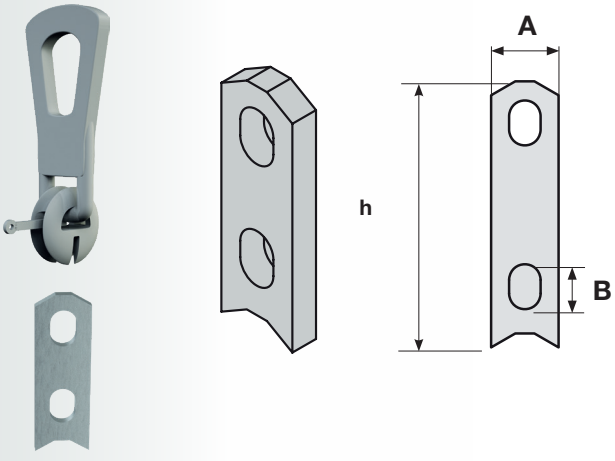
SPREAD ANCHOR

LOAD GROUP	LOAD CAPACITY		A	B	h
2.5 ton	2.5 ton	mm	30	20	130
5.0 ton	5.0 ton	mm	40	22	180
10.0 ton	7.5 ton	mm	60	30	260
	10 ton	mm	60	30	300



TWO-HOLE ANCHOR

LOAD GROUP	LOAD CAPACITY		A	B	h
2.5 ton	2.5 ton	mm	30	20	90
5.0 ton	5.0 ton	mm	40	22	120
10.0 ton	7.5 ton	mm	60	30	160
	10 ton	mm	60	30	170



FIXING SYSTEMS

EDIL TP BEAM - PILLAR

CE
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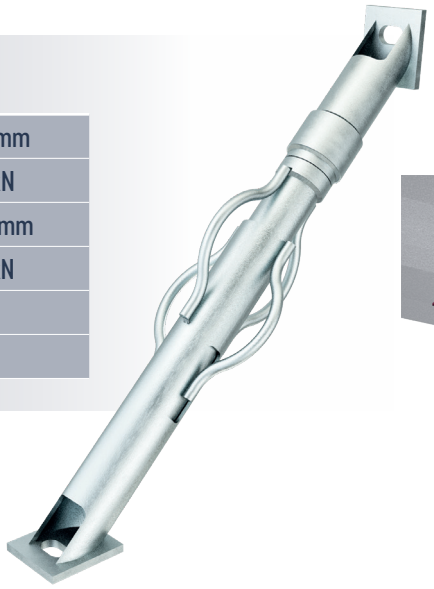
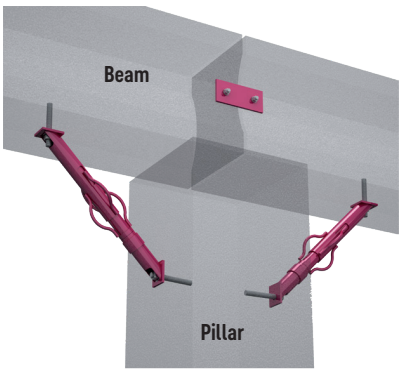
PROJECT PARAMETER

DISPLACEMENT YIELD STRENGTH	d_{yd} = ± 4,5 mm
DISPLACEMENT AXIAL FORCES	V_{yd} = 50 kN
LAST DISPLACEMENT	d_{ud} = ± 17,5 mm
LAST AXIAL FORCES	V_{ud} = 68 kN
SCREW ANCHOR	M20
DEFORMED ELEMENTS	4





EDIL TP-N BEAM - PILLAR

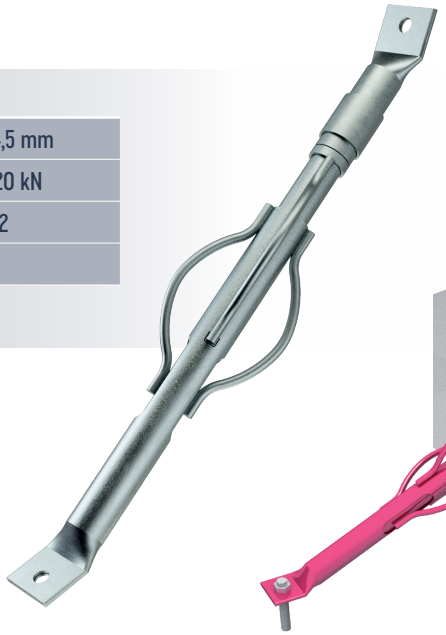
CE
UNI EN 15129

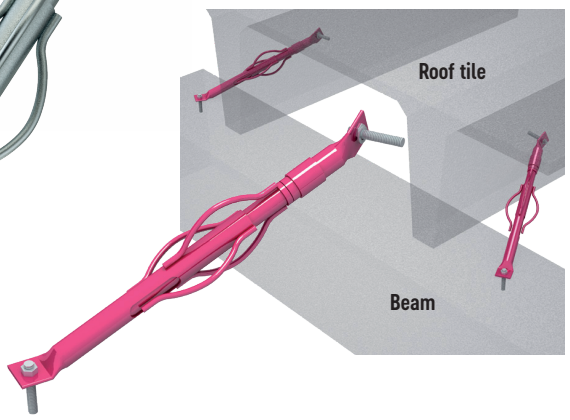
PROJECT MOVEMENT	d_{bd} = ± 12,5 mm
PROJECT AXIAL FORCES	V_{Ebd} = 72 kN
PROJECT DAMPING	39%
SCREW ANCHOR	M24
DEFORMED ELEMENTS	6

EDIL TT BEAM - ROOF TILE FIXING

CE
UNI EN 1090-1:2011

PROJECT MOVEMENT	d_{bd} = ± 4,5 mm
PROJECT AXIAL FORCES	V_{Ebd} = 20 kN
SCREW ANCHOR	M12
DEFORMED ELEMENTS	4





EDIL TT-N BEAM - ROOF TILE FIXING

CE
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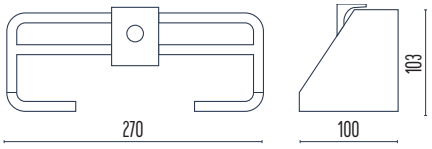
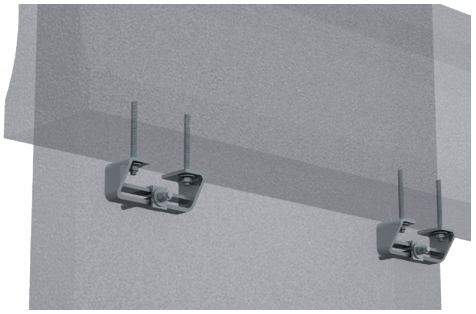
PROJECT MOVEMENT	d_{bd} = ± 12,5 mm
PROJECT AXIAL FORCES	V_{Ebd} = 20 kN
PROJECT DAMPING	43%
SCREW ANCHOR	M16
DEFORMED ELEMENTS	4

RETAINING SYSTEMS

EDIL PV FOR VERTICAL PANELS

CE
UNI EN 1090





PROJECT MOVEMENT	± 100 mm
PROJECT RESISTANCE	18 kN
SCREW ANCHOR	M16

EDIL PO FOR HORIZONTAL PANELS

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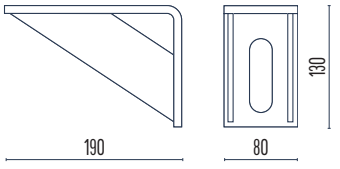

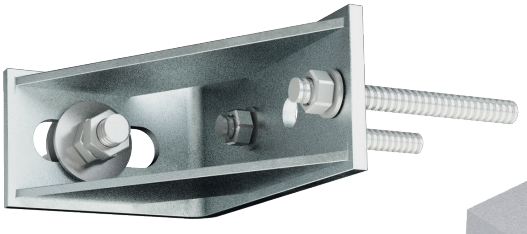

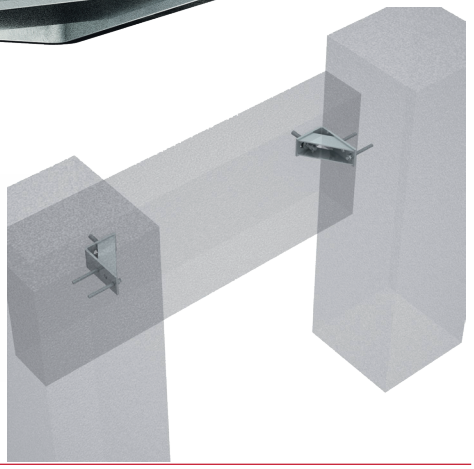

PROJECT MOVEMENT	± 30 mm
PROJECT RESISTANCE	17 kN
SCREW ANCHOR	2M12 1M16

CONNECTION SYSTEMS

EDIL CTT BEAM - ROOF

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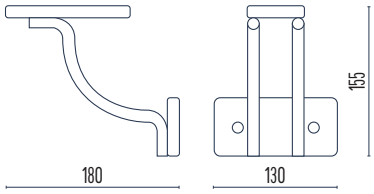
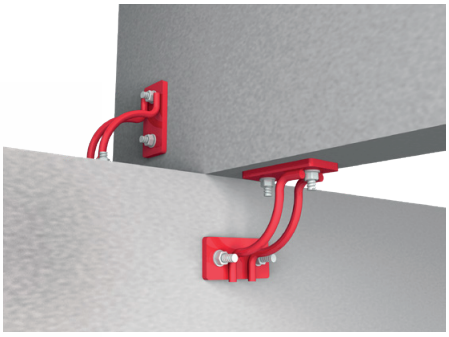


PROJECT MOVEMENT AXIS X	d_{bd} = ± 25 mm
PROJECT AXIS FORCE X	V_{Ebd} = 12 kN
PROJECT MOVEMENT AXIS Y	d_{bd} = ± 12,5 mm
PROJECT AXIS FORCE Y	V_{Ebd} = 6,5 kN
SCREW ANCHOR	M12



EDIL TTR BEAM - ROOF TILE CONNECTION

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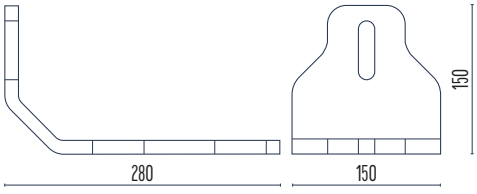

PROJECT AXIS FORCE	V_{Ebd} = 20 kN
SCREW ANCHOR	M16

EDILMATIC

EDILMATIC is specialised in research, planning, development and production of systems for the assembly and strengthening of precast structures.

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