

Section 3: Profile Connectors

Overview

One of the greatest strengths of the Bosch Rexroth structural aluminum framing system is the wide choice of connection methods, and the ability to provide the right connection regardless of whether your concern is strength, flexibility, or aesthetics, or a combination of all those advantages.

New! *designLINE* - quality and performance with appeal

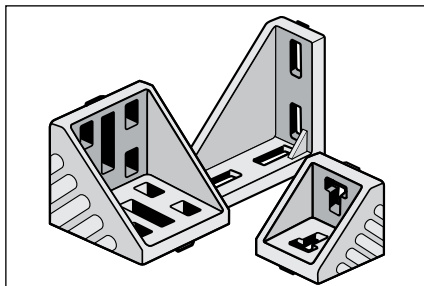
Need a way to make your already appealing structures even more attractive? Do you value an attractive design? Then look for the new *designLINE* versions of our standard connectors throughout this section.

A new surface treatment with special silver paint ensures that *designLINE* components seamlessly match the aluminum frame. The paint is scratch proof, preserving the connector's ESD compatibility.

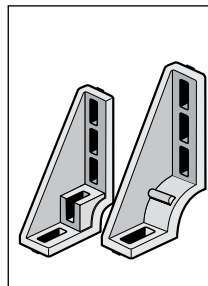
For added convenience all *designLINE* connectors are available as a kit with fasteners and caps (where provided).

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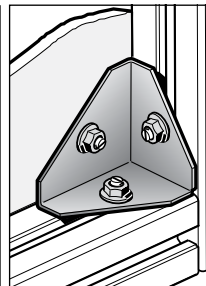
90° Right Angle Connectors



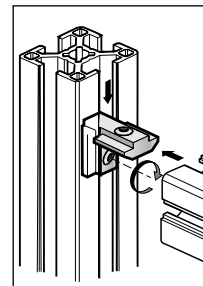
Die-Cast Gussets
 20-Series 3-3 • 30-Series 3-4
 40-Series 3-5 • 45-Series 3-6
 50-Series 3-7 • 60-Series 3-8
 80-Series 3-8 • 90-Series 3-9
 100-Series 3-9



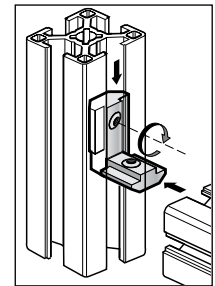
Die-Cast Foundation Brackets
 3-10 & 3-11



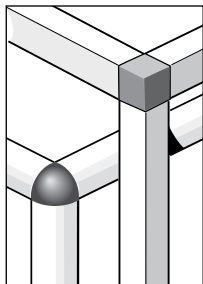
42x60 Sheet Metal Gusset
 3-12



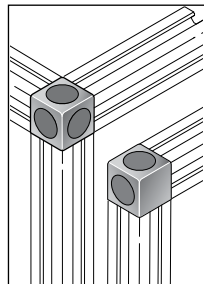
Inside-to-Outside Gussets
 3-12



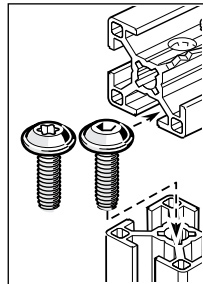
Inside-to-Inside Gussets
 3-13



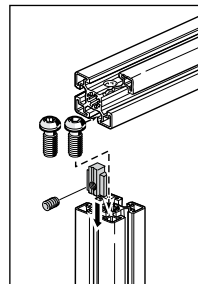
Corner Brackets
 3-14



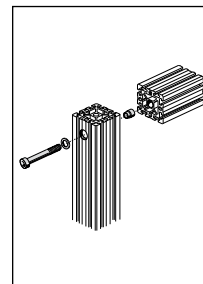
Corner Cube Kits
 3-15



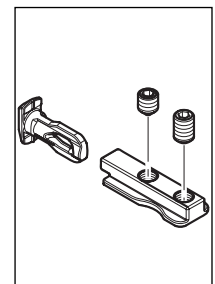
S6, S8, & S12 Self-Tapping Connection Screws
 3-16



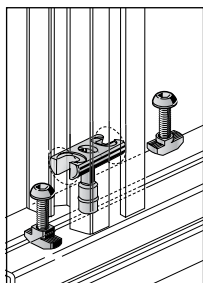
M12 Connection Screws and Anti-Rotation T-Blocks
 3-17



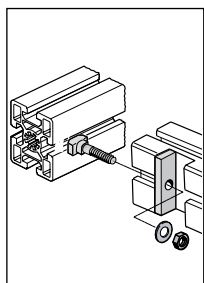
M16 Connection Screw
 3-18



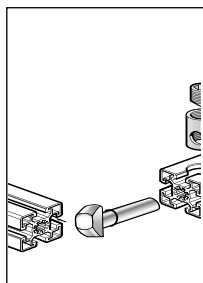
Tension Connector
 3-18



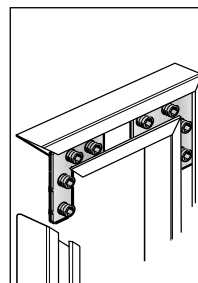
Bolt Connector Kits
 3-19 & 3-20



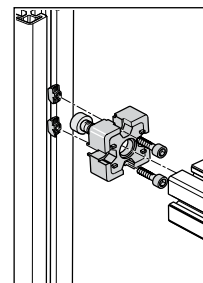
Cross Connector Kit
 3-20



Quick Connectors/Rigid
 3-21



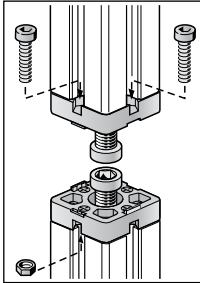
Mitered Corner Connectors
 3-22



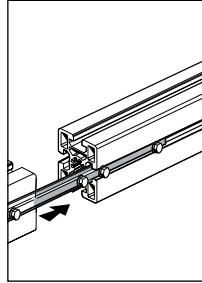
T-Connector Kits
 3-23

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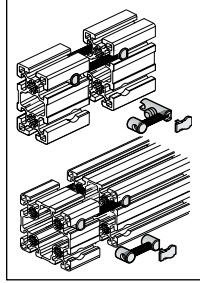
180° Straight-Line Connectors



End Connector
Kits
3-24

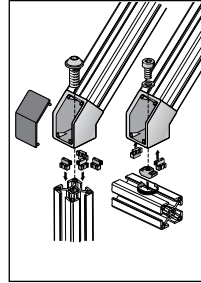


8mm & 10mm
Connection Link
Kits
3-25



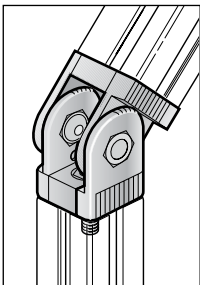
End-to-End Bolt
Connector Kits
3-25

45° Angle Connectors

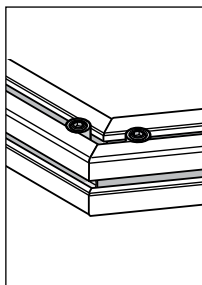


45° Angle Con-
nector
Kits – 30mm,
40mm & 45mm
3-26 & 3-27

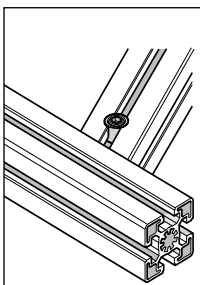
Multi-Angle Connectors



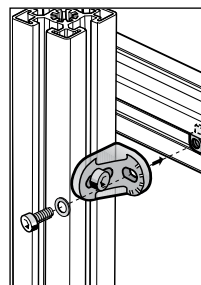
Multi-Angle Con-
nector Kits
3-28 & 3-29



End-to-End Vari-
able Angle Bolt
Connector
3-30

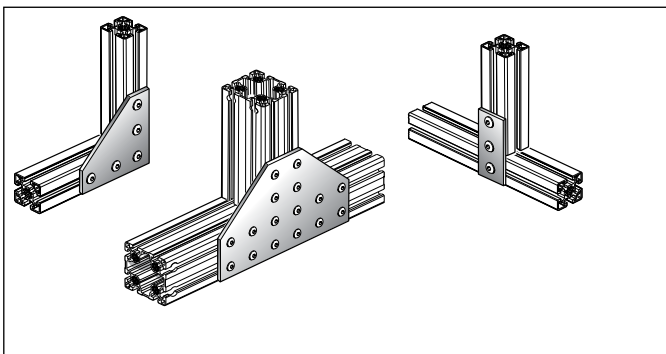


End-to-Side Vari-
able Angle Bolt
Connector
3-31



Adjustable Angle
Gusset Kits
3-32

Joining Plates

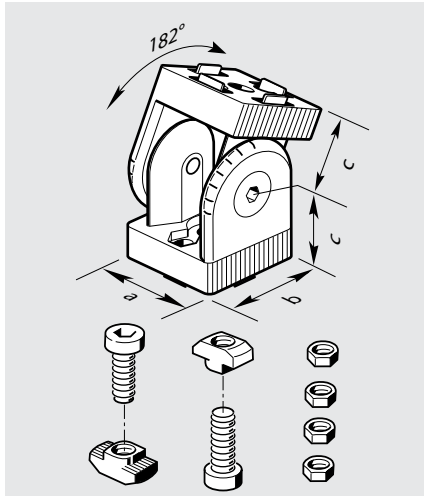


Corner, T-Junction, Rectangular, and
Cross Junction Joining Plates
3-33 to 3-35

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Multi-Angle Connector Kits

30x30 Multi-Angle Connector Kit 8

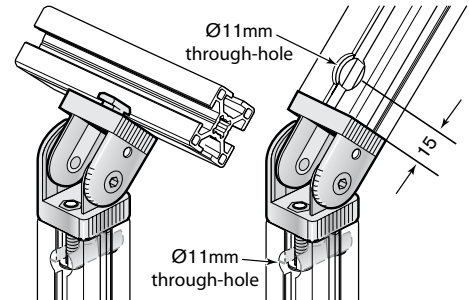


Features:

- Includes hardware to connect two profiles with 8mm T-slots side-by-side or use 10mm M6 T-nuts to connect (part number 3 842 530 285) profiles with 10mm T-slots
- Connect the end of a 30x30 profile (including 30x30 2S and 3S) to the side of a profile with 8mm or 10mm T-slots (requires one 30mm bolt connector kit, sold separately)
- Connect two 30x30 profiles end-to-end (requires two 30mm bolt connector kits, sold separately)

Material:

- Joint components: die-cast zinc



Machining Required:

- 11 mm through-hole, 15mm from end of profile for each end-to-end connection

Multi-Angle Connector	Dimension in mm			⌀ max. in Nm with pin
	a	b	c	
30x30	30	30	25	15
40x40	40	40	34	15*

* Max. torque with handle is 5Nm

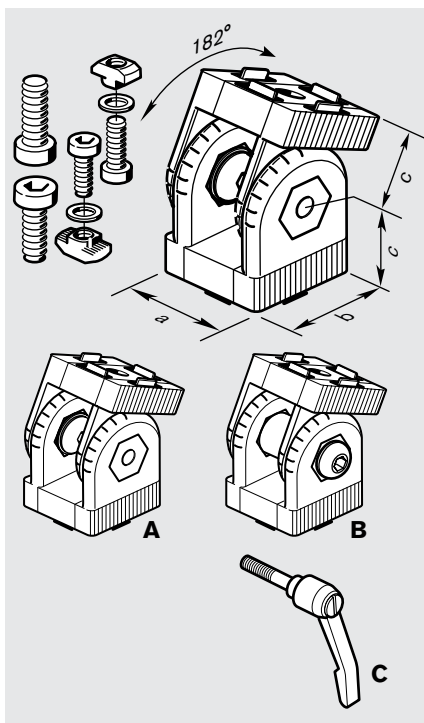
Description

Description	Lot Size*	Part Number
30x30 multi-angle connector kit <i>designLINE</i>	1	3 842 538 683
30x30 multi-angle connector kit	1	3 842 502 683
30mm bolt connector kit**	10	3 842 535 624

**One kit required for each end connection

* For smaller quantities, please contact your local distributor.

40x40 Multi-Angle Connector Kit 10

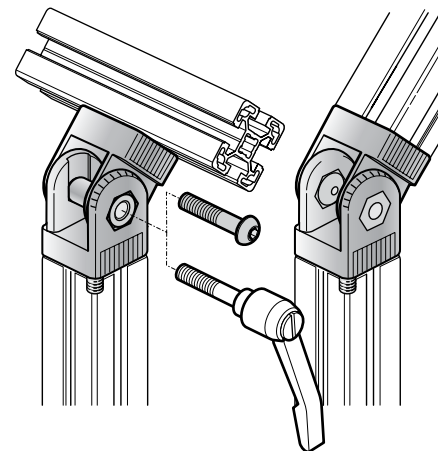


Features:

- Connect two profiles with 10mm T-slots side-by-side
- Connect the end of any 40x40 profile to the side of a profile with 10mm T-slots
- Connect any two 40x40 profiles end-to-end
- Available as standard or lockable version (locking handle sold separately below)
- Includes all fasteners, no machining required

Material:

- Joint components: die-cast zinc, nickel-plated

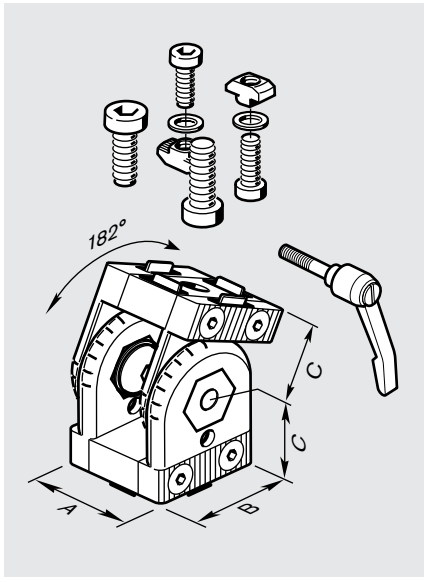


Description

Description	Lot Size	Part Number
A 40x40 multi-angle connector kit <i>designLINE</i>	1	3 842 538 684
A 40x40 multi-angle connector kit	1	3 842 532 235
B 40x40 multi-angle conn. kit, lockable <i>designLINE</i>	1	3 842 538 685
C Locking handle, 40mm	1	3 842 516 847

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45mm and 60mm Multi-Angle Connector Kit 

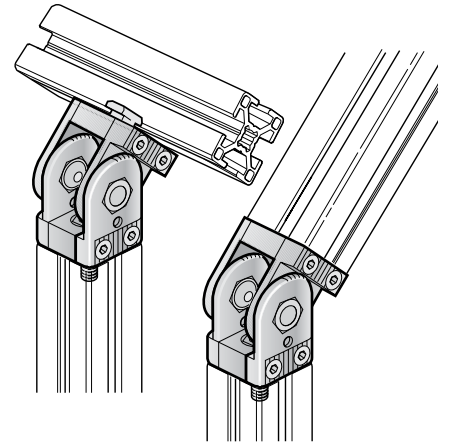


Features:

- Create a side-to-side, end-to-side, or end-to-end connection
- Allows angle to be adjusted without loosening any screws or T-nuts, or can be pinned in place for a fixed connection
- Maximum torque loading
- Includes all fasteners, no machining required

Material:

- Joint components: die-cast zinc, nickel-plated



Multi-Angle Connector	Dimension in mm			⌀ max. in Nm with pin
	A	B	C	
45x45	45	45	38	15*
45x60	60	45	38	15*
60x45	45	60	45.5	15*
60x60	60	60	45.5	15*

* Max. torque with handle is 5Nm

Description	Lot Size	Part Number
45x45 multi-angle connector kit <i>designLINE</i>	1	3 842 538 686
45x45 multi-angle conn. kit, lockable <i>designLINE</i>	1	3 842 538 687
60x45 multi-angle connector kit <i>designLINE</i>	1	3 842 539 799
60x60 multi-angle connector kit <i>designLINE</i>	1	3 842 539 800
45x45 multi-angle connector kit	1	3 842 502 684
45x60 multi-angle connector kit	1	3 842 502 685
60x45 multi-angle connector kit	1	3 842 502 688
60x60 multi-angle connector kit	1	3 842 502 687
Locking Handle 45mm	1	3 842 538 607
Locking Handle 60mm	1	3 842 505 144

Assembly Note

	F1	F2
30x30	10,000 N	600 N
45x45	15,000 N	1,000 N
60x60	20,000 N	1,100 N

f [mm]	30x30	45x45	45x60	60x60	45x90	45x180
0	0	0	0	0	0	0
5	~10	~20	~30	~40	~60	~120

Section 3: Profile Connectors

Multi-Angle Connectors

Variable Angle Bolt Connectors 8-10

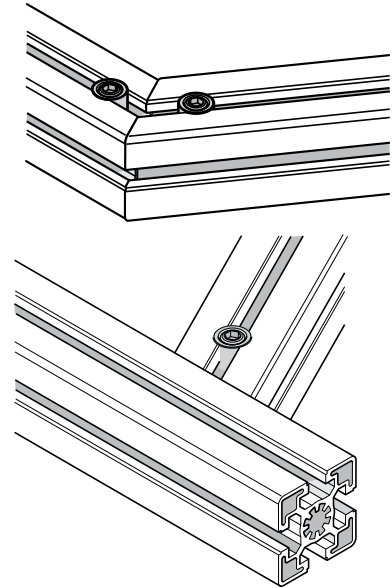
Features:

- Provide a simple and easy way to connect profiles at various angles
- Allow one-time bend to desired angle, with correction bend of up to 10°
- Keep three T-slots open for panels or accessories
- Use drilling/boring jigs (listed below) for proper through-hole spacing

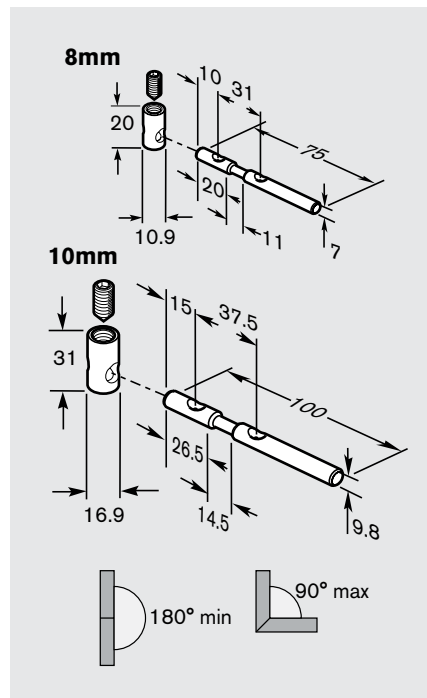
Material:

- Tie-rod: stainless steel
- Barrel: galvanized steel

	30x30	45x45	45x45H
	24 Nm	110 Nm	145 Nm
	1100 N	1500 N	1500 N
	35 Nm	120 Nm	140 Nm
	650 N	1000 N	1100 N
	40 Nm	95 Nm	180 Nm



End-to-End Variable Angle Bolt Connectors

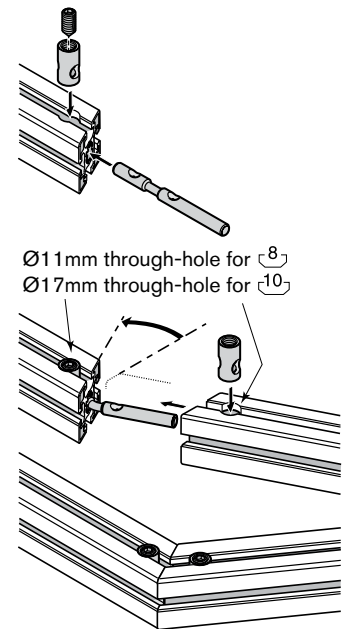


Features:

- Allowable angle up to 90°
- Connects two profiles end-to-end

Machining required:

- 11mm through-hole (8mm profiles) or 17mm through-hole (10mm profiles) in both profiles

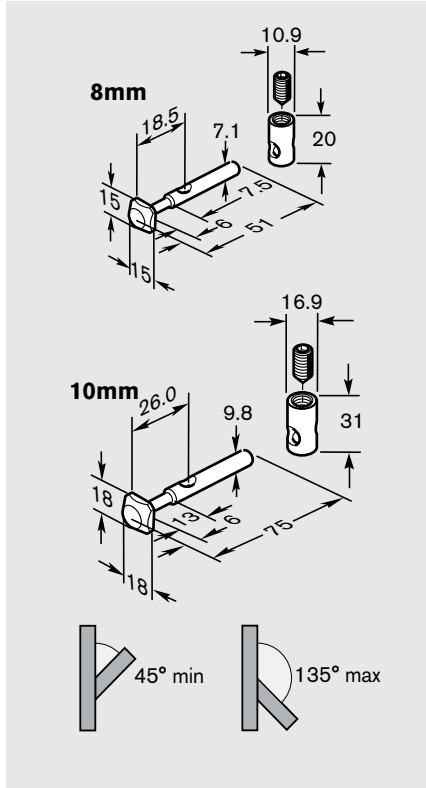


Description	Lot Size*	Part Number
8mm end-to-end variable angle bolt connector	10	3 842 535 630
10mm end-to-end variable angle bolt connector	10	3 842 535 634

* For smaller quantities, please contact your local distributor.

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End-to-Side Variable Angle Bolt Connectors

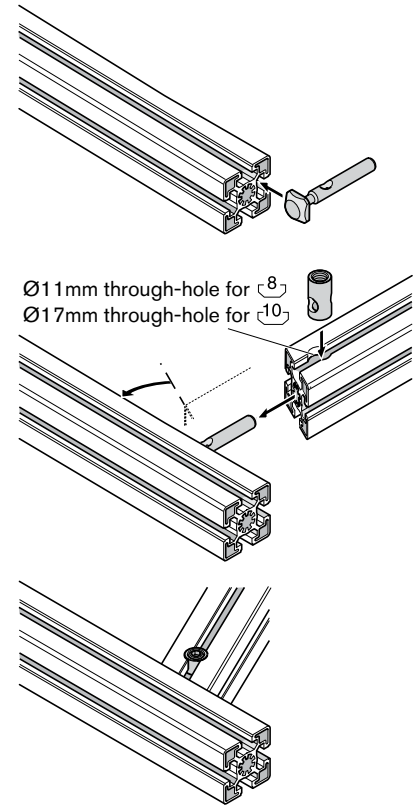


Features:

- Allows angles from 45° to 135°
- Connects the end of one profile to the side of another

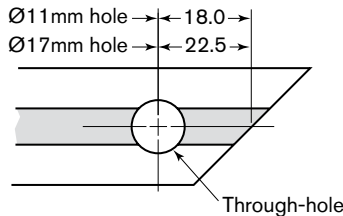
Machining required:

- 11 mm through-hole (8mm profiles) or 17mm through-hole (10mm profiles) in both profiles



Assembly Note

When making angled connections, locate through-holes in the profiles as specified below. Use the 8mm or 10mm drilling/boring jig (sold at right, or see the Tools section for details) for proper spacing.



Prior to installation, bend connector to within ±10° of desired angle

Description	Lot Size*	Part Number
8mm end-to-side variable angle bolt connector	10	3 842 535 629
10mm end-to-side variable angle bolt connector	10	3 842 535 635

* For smaller quantities, please contact your local distributor.

Description	Lot Size	Part Number
8mm drilling/boring jig	1	3 842 516 729
10mm drilling/boring jig	1	3 842 516 731