

Verbindungselemente / Connection elements / Éléments de jonction

Verbindungstechnik Connections Technique de jonction

▶ Mit dem Profilbaukasten der Bosch Rexroth AG erhalten Sie das professionellste und umfangreichste Angebot in Sachen Verbindungstechnik. Damit haben Sie die Gewähr, daß Sie für jede Anwendung das richtige Verbindungselement finden.

Eines haben alle Profil-Verbindungen gemeinsam: sie werden geschraubt. Schraubverbindungen lassen sich einfach und schnell herstellen. Sie bieten gute Festigkeitseigenschaften auch für hohe Belastungen. Zudem können Sie Aufbauten aus Mechanik Grundelementen jederzeit umbauen, erweitern und geänderten Bedürfnissen anpassen. Die eingesetzten Bauteile können Sie immer wieder verwenden.

Die Auswahl des richtigen Verbindungselementes orientiert sich an Ihren Bedürfnissen. Folgende Kriterien sollten Sie dabei besonders beachten:

Funktionalität: Wollen Sie Ihre Profile starr oder gelenkig miteinander verbinden; sollen die Profilmuten frei bleiben – für jeden Anwendungsfall finden Sie das richtige Verbindungselement (☞ 3-3, 3-4).

Belastbarkeit: Sicherheit geht über alles! Und deshalb finden Sie auch für höchste Belastungen die passenden Verbindungselemente (☞ 3-5 ⇨ 3-7).

Design: Wenn Sie mehr als die reine Funktionalität suchen - die Verbindungstechnik genügt auch hinsichtlich der optischen Wirkung höchsten Ansprüchen.

▶▶ With their modular profile system Bosch Rexroth AG provide you with the most professional and widely assorted range of connection technology equipment available. You are therefore guaranteed to find the right connection element for every possible situation.

All profile connectors have one thing in common: they are screwed into place. Screwed connections can be made quickly and easily. They provide excellent stability, even under heavy loads. And they also have the advantage that you can rebuild constructions made of basic mechanical elements at any time, or extend them for new requirements. This means you can reuse the same components again and again. This connection technology makes working with aluminium profiles an extremely attractive prospect!

Selecting the right connection elements depends on your requirements. You should take the following criteria particularly into account when choosing:

Functionality: Do you want to connect your profiles with rigid or moving joints? Do you need to keep the profile grooves free for other uses? – You can find a suitable connection element for absolutely every situation (☞ 3-3, 3-4).

Loading capacity: We believe safety always comes first. For this reason you will find suitable connection elements, even for extremely heavy loads (☞ 3-5 ⇨ 3-7).

Design: Are you looking for more than pure functionality? If so, you will find that the connection technology system more than satisfies the very highest of standards as far as visual effect is concerned.

▶▶▶ Avec son système modulaire de profilés, Bosch Rexroth AG vous propose une multitude d'éléments des plus professionnels en matière de technique de jonction. Vous avez ainsi la garantie de trouver l'élément de jonction qu'il vous faut pour vos applications.

Les jonctions ont en tous les cas une chose en commun : elles sont vissées entre elles. Les raccords à vis sont simples à effectuer et ne demandent pas beaucoup de temps. Elles sont très résistantes même avec des charges importantes. D'autre part, il vous est possible à tout moment de modifier, d'agrandir une installation faite à partie d'éléments mécaniques de base ou de l'adapter à vos besoins. Il vous est toujours possible de réutiliser les éléments.

Pour sélectionner le bon élément de jonction, il importe avant tout de connaître vos besoins. C'est pourquoi, les critères suivants sont particulièrement importants :

Fonction : Est-ce que vos jonctions de profilés devront être raides ou réglables ; est-ce que les rainures de profilé doivent rester libres ou non – vous trouverez l'élément de jonction qui convient pour chaque application (☞ 3-3, 3-4).

Capacité de charge : C'est la sécurité qui compte avant tout ! C'est pourquoi vous trouverez les éléments de jonction qui conviennent également pour les charges très élevées (☞ 3-5 ⇨ 3-7).

Esthétique : Si vous êtes à la recherche de quelque chose qui ne doit pas être seulement fonctionnel – le technique de jonction surprend même les plus exigeants.

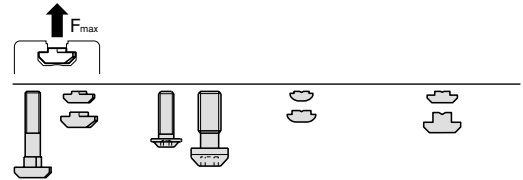
Verbindungselemente / Connection elements / Éléments de jonction

Profilnut Belastbarkeit

Profile groove load carrying capacity

Rainure de profilé capacité de charge

Statische Belastungsgrenzwerte der Nut (Beginn der plastischen Verformung)
 Static load limit values of groove (beginning of plastic deformation)
 Valeur limite statique de charge de rainure (début de la déformation plastique)



3

6		20x20, 20x20R 10x40 20x40, 20x60 20x40x40	1 700 N	2 000 N	—	3 000 N
8		30x30, 30x30R 30x30°, 30x45°, 30x60° 11x20, 15x120 30x45, 30x60, 30x60x60	4 000 N	5 000 N	2 200 N	6 000 N
10		40x40L, 40x40LR 45x45L, 45x45LR 45x30°, 45x45°, 45x60° 50x50L 60x60L 80x80L 100x100L 15x22,5, 15x180, 22,5x45 40x80L, 40x120L, 40x160L 45x90L 50x100L 80x160L 100x200L	7 000 N	10 000 N	9 000 N	12 000 N
		45x45 60x60 90x90L 100x100L 22,5x180 45x60 45x90, 45x90x90 45x180 90x180L	12 000 N	15 000 N	13 000 N	17 000 N
		45x270 60x90 90x90 90x180 90x360	18 000 N	22 000 N	18 000 N	24 000 N

Profilverbindung Belastbarkeit

Profile connection load carrying capacity

Jonction de profilés capacité de charge

▶ Angegebene Belastungsgrenzwerte wurden exemplarisch im Versuch ermittelt (trocken). Gesetzliche und den Regeln der Technik entsprechende Sicherheitsfaktoren und Bauvorschriften sind zu berücksichtigen!

▶▶ The stated load limit values were determined using a test model (dry). Safety factors and building specifications compulsory by law and in accordance with technical rules must be observed!

▶▶▶ Les valeurs limite de sollicitation indiquées ont été déterminées à titre d'exemple au cours d'essais (sec). Tenir compte des facteurs de sécurité légaux et correspondant aux règles de la technique et aux règlements de sécurité de la construction.

Statische Belastungsgrenzwerte der Verbindung (Beginn der plastischen Verformung)





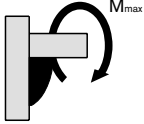
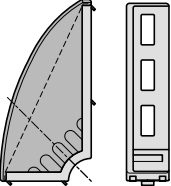







Static load limit values of connection (beginning of plastic deformation)

Valeur limite statique de charge de la jonction (début de la déformation plastique)




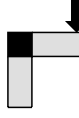
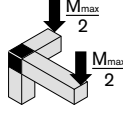
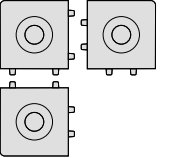































Profile	Drill Size	Rotation	Max. Torque	Max. Force	Max. Moment		
S6, S8, S12, M12	6, 8, 10						
	S6	6	10 Nm	500 N	8 Nm		
	S8	8	25 Nm	800 N	43 Nm		
	S12, M12	10	35 Nm	1 300 N	80 Nm		
			(±5%)				
8, 10							
	8	8	12 Nm	2 200 N	50 Nm		
	10	10	15 Nm	2 800 N	100 Nm		
			(±5%)				
6, 8, 10							
	R	6	3 Nm	600 N	10 Nm		
	R	8	12 Nm	2 500 N	50 Nm		
R	10	15 Nm	3 000 N	100 Nm			
			(±5%)				
6, 8, 10							
	20/20	6	5 Nm	700 N	6 Nm	25 Nm	—
	20/40	6	5 Nm	1 400 N	15 Nm	50 Nm	8 Nm
	30/30	8	10 Nm	1 250 N	25 Nm	75 Nm	—
	30/60	8	10 Nm	2 500 N	100 Nm	170 Nm	25 Nm
	60/60-8	8	10 Nm	5 000 N	320 Nm	370 Nm	110 Nm
	60/60-10	10	25 Nm	3 000 N	125 Nm	150 Nm	—
	40/40	10	25 Nm	3 000 N	55 Nm	145 Nm	35 Nm
	40/80	10	25 Nm	6 000 N	180 Nm	400 Nm	60 Nm
	45/45	10	25 Nm	3 000 N	60 Nm	160 Nm	—
	45/90	10	25 Nm	6 000 N	180 Nm	400 Nm	60 Nm
	90/90	10	25 Nm	12 000 N	370 Nm	800 Nm	200 Nm
	43x42	10	25 Nm	2 000 N	160 Nm	—	—
				(±5%)			

3-19
3-26





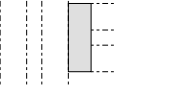







Verbindungselemente / Connection elements / Éléments de jonction

						
						
		30/120	  10 Nm	3 750 N	100 Nm	47 Nm
		40/160	  25 Nm	9 000 N	250 Nm	60 Nm
		45/180	  25 Nm	9 000 N	250 Nm	65 Nm
			 (±5%)			




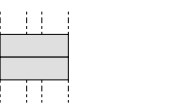







3-27
3-30

					
					
20/2	 		10 Nm	18 Nm	23 Nm
20/3	 		10 Nm		
30/2	 		25 Nm	80 Nm	
30/3	 		25 Nm		85 Nm
40/2	 		35 Nm	60 Nm	
40/3	 		35 Nm		70 Nm
45/2	 		35 Nm	45x45L 45x45	150 Nm 200 Nm
45/3	 		35 Nm	45x45L 45x45	170 Nm 240 Nm
50/2	 		35 Nm	120 Nm	
50/3	 		35 Nm		140 Nm
			 (±5%)		





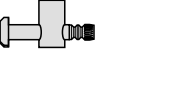










3-40
3-42

					
					
30x30	 		25 Nm (S8) / 10 Nm (M5)	4 000 N	80 Nm
45x45	 		35 Nm (S12) / 12 Nm (M6)	9 000 N	200 Nm
			 (±5%)		





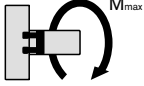





























3-46

				
				
30x30	 		25 Nm (S8) / 10 Nm (M5)	81 Nm
45x45	 		35 Nm (S12) / 12 Nm (M6)	200 Nm
			 (±5%)	

3-47

					
					
	 		12 Nm	500 N	40 Nm
	 		12 Nm	2 000 N	70 Nm
	 		25 Nm	4 000 N	140 Nm
			 (±5%)		

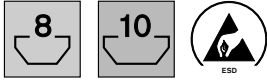
3-50

						
						
ø11, L=30	 		6 Nm	2 500 N	60 Nm	20 Nm
ø17, L=40	 		25 Nm	4 000 N	180 Nm	40 Nm
ø17, L=45	 		25 Nm	4 000 N	180 Nm	60 Nm
ø17, L=50	 		25 Nm	4 000 N	200 Nm	65 Nm
ø17, L=60	 		25 Nm	4 000 N	200 Nm	80 Nm
ø17, L=80	 		25 Nm	5 000 N	800 Nm	170 Nm
ø17, L=90	 		25 Nm	5 000 N	800 Nm	200 Nm
ø17, L=100	 		25 Nm	5 000 N	1 000 Nm	480 Nm
ø28, L=22,5	 		25 Nm	2 000 N	—	—
			 (±5%)			

3-52

Verbindungselemente / Connection elements / Éléments de jonction

Bolzenverbinder Ø 11, Ø 17, Ø 28
Bolt connector
Jonction à boulons

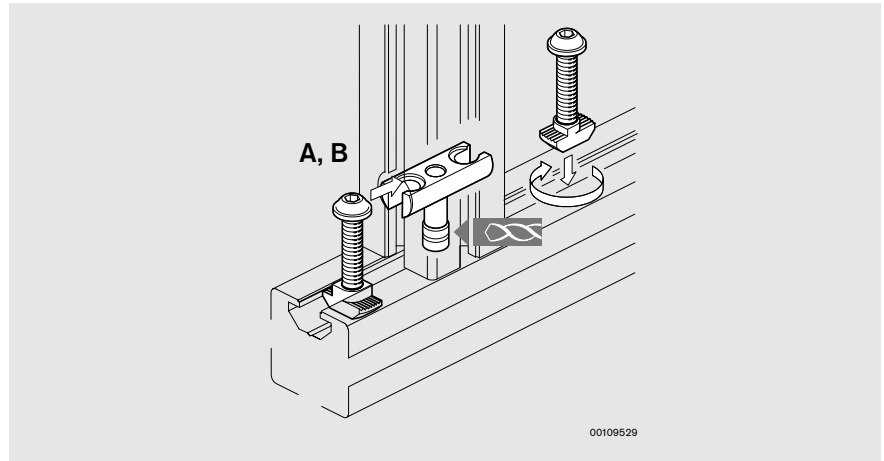


00111496

Beim Bolzenverbinder werden Kräfte symmetrisch über zwei Schrauben in den stabilen Profilkern eingeleitet. Damit ist er für hohe Belastungen – auch Torsion – geeignet.

Material A–D: Stahl, verzinkt
 Material E: Zinkdruckguß
 Material Zentrierstift, Abdeckkappen: PA, schwarz

The bolt connector guides forces symmetrically into the stable profile core over two screws. This makes it suitable for heavy loads and torsional stress.

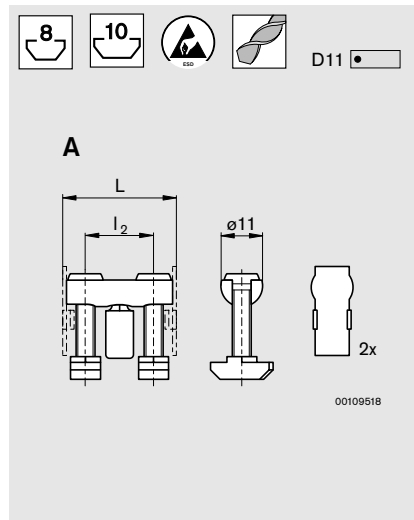


00109529

A–D, material: galvanized screw steel.
 E, material: diecast zinc
 Centring bolt, caps, material: black PA

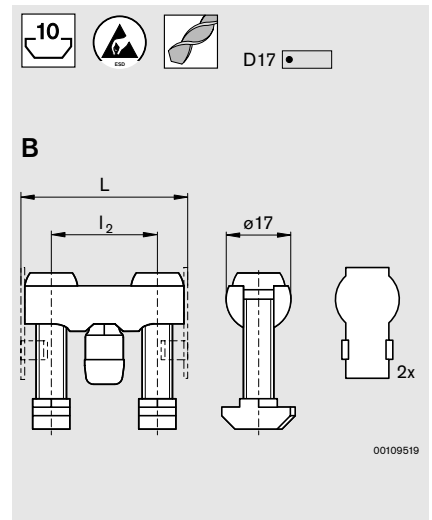
Avec la jonction à boulons, les forces sont réparties symétriquement à l'intérieur stable du profilé par l'intermédiaire de deux vis. Il convient ainsi pour des charges très importantes même pour les torsions.

Matériau A–D : acier galvanisé
 Matériau E : zinc moulé sous pression
 Matériau goupille de centrage, caches : PA noir



D11

00109518

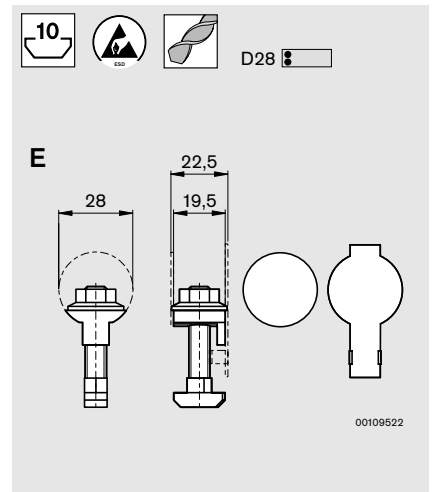
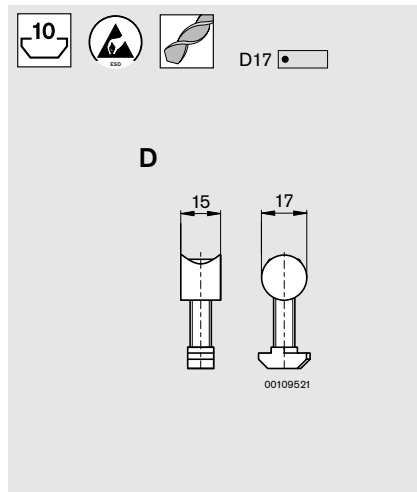
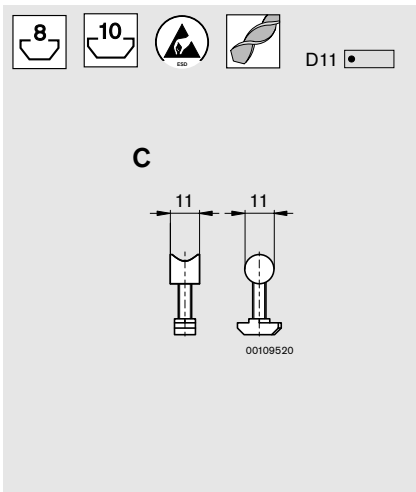
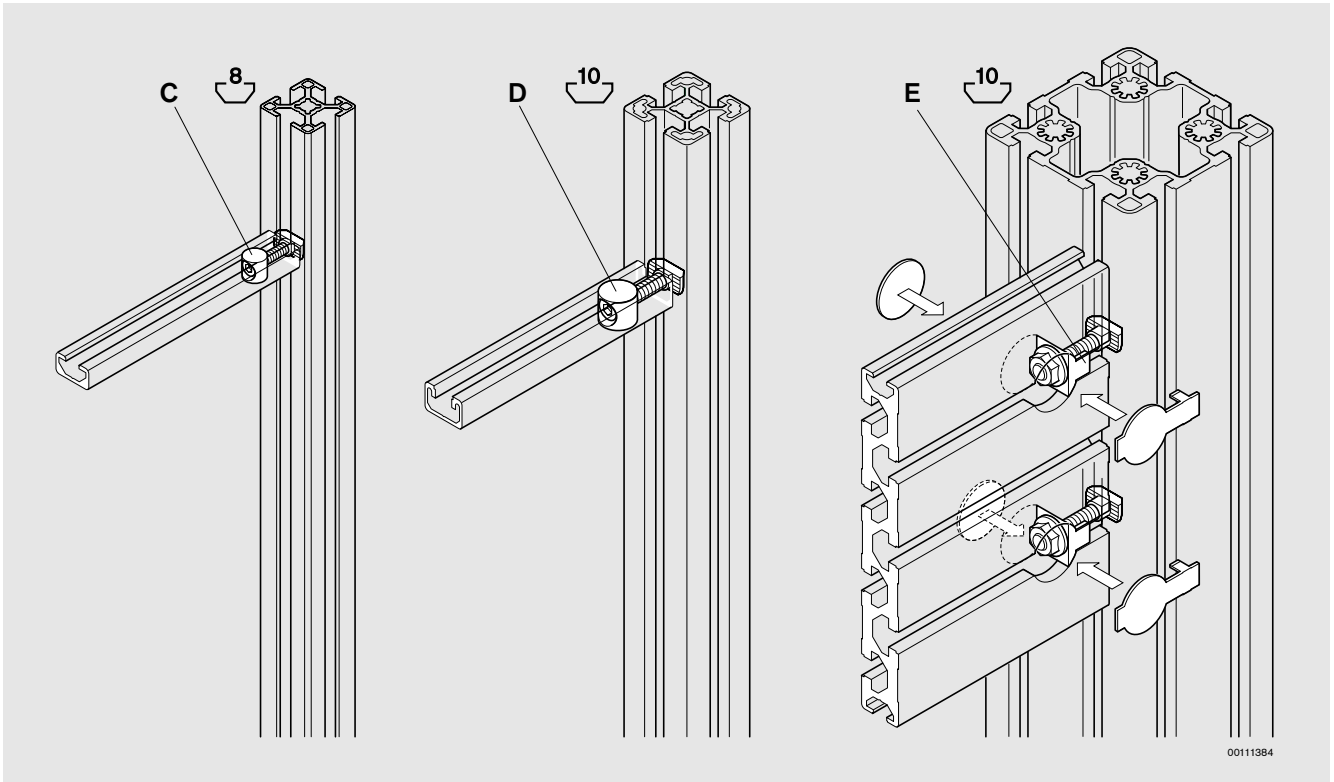


D17

00109519

	L	l ₂	LE10
A	30	18	3 842 352 333
	30	18	3 842 352 335

	L	l ₂	LE10	
B	40	23	3 842 528 966	NEW 2002
	45	28	3 842 500 924	
	50	33	3 842 529 275	NEW 2002
	60	43	3 842 500 925	
	80	63	3 842 529 276	NEW 2002
	90	73	3 842 500 926	
	100	83	3 842 529 277	NEW 2002



		LE10
C		3 842 513 605
		3 842 513 627

		LE10
D		3 842 513 604

		LE10
E		3 842 518 421