

# EcoShape

## The Next Dimension in Tubular Framing Systems

Version **1.1**

The Drive & Control Company



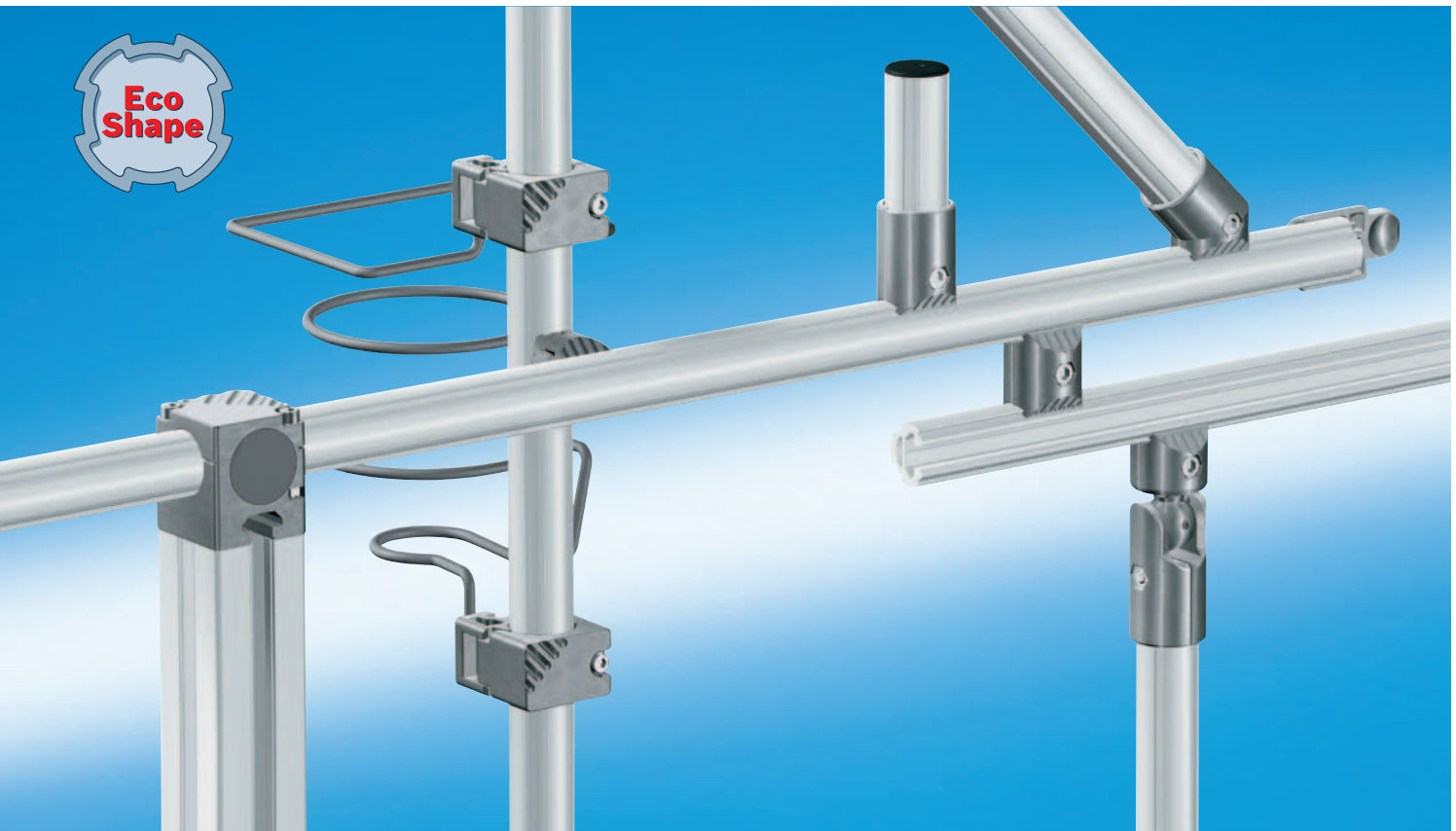
Tubular Framing System

# EcoShape

## Easy<sup>3</sup> – Versatile, efficient, simple

Professionals can find out  
more at:  
[www.ecoshape-rexroth.com](http://www.ecoshape-rexroth.com)

Individual solutions for numerous applications



### Easy<sup>3</sup> – Versatile, efficient, simple

This is the EcoShape idea.

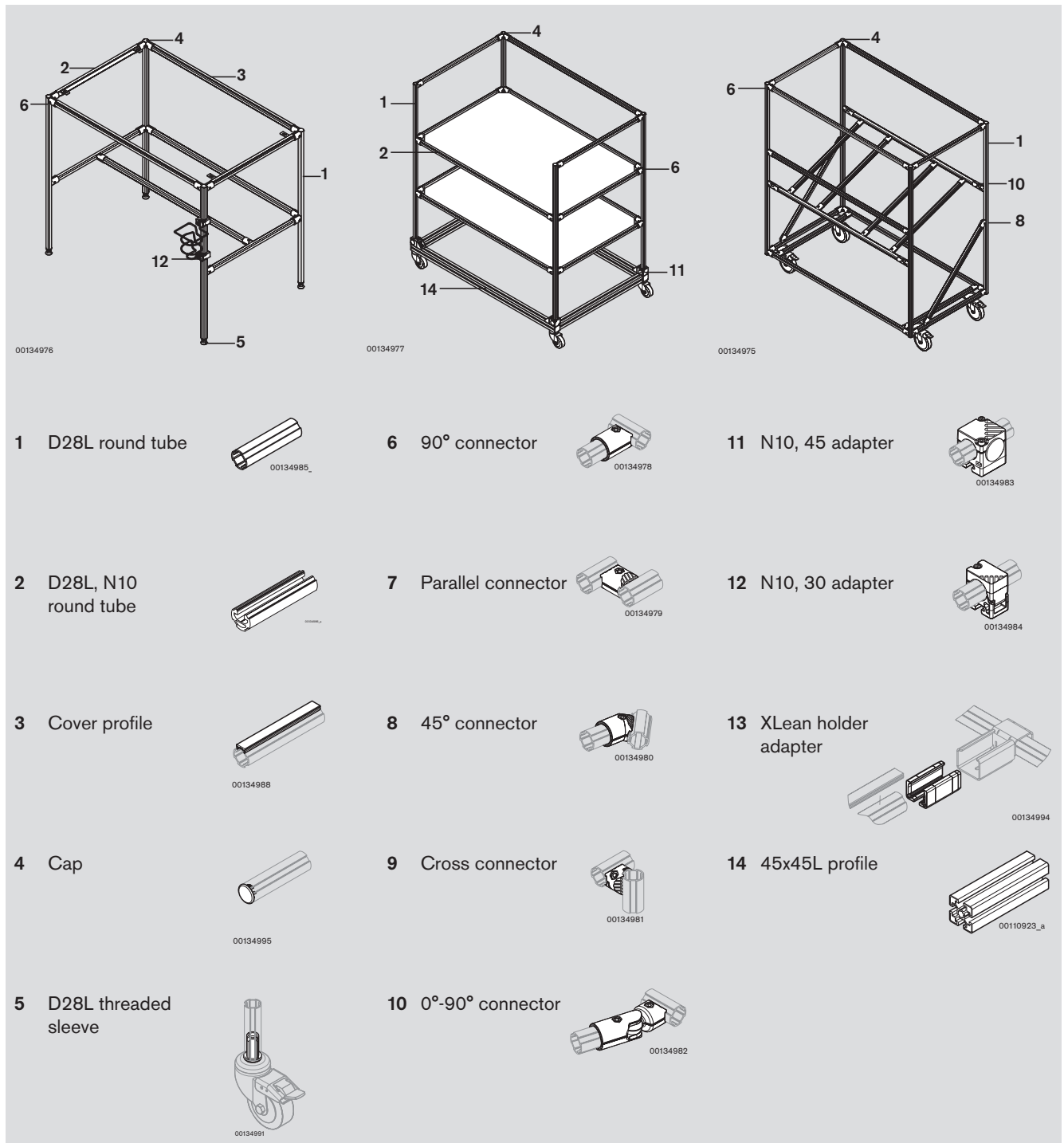
Its user-friendly design and its elegant look appeal to a broad range of tastes.

With just a few components and a minimum investment in time and costs, your existing production equipment can be optimized or extended.

EcoShape easily adapts to your specific requirements. You can create the precise solutions you need – and increase productivity.

It's the ideal combination of efficiency and lean management. Sometimes less is simply more!

## Tubular Framing System

Fast, accurate planning with MT<sub>pro</sub>

Tubular Framing System

# EcoShape

## Shape your future with Rexroth's new tubular framing system

Convenient planning – instant, easy implementation



### Unmatched versatility

EcoShape is unmatched in its versatility: It makes an almost unlimited number of designs possible with just a few components. The only tubular framing system of its kind, it is T-slot enabled and fully compatible with the profiles in Rexroth's Modular Aluminum Framing System and Manual Production Systems. So you have even more freedom to design professional, custom workstations, material shuttles, and flow racks to meet your needs, as well as many other applications.

- Unique flexibility and versatility for the widest variety of combinations
- Create versatile and uniform applications
- Professionally extend and optimize existing production lines

### Strikingly simple

It's child's play to create new solutions or expand existing ones with EcoShape: Intelligent connector technology easily accommodates small tolerance differences to make it easier to cut the round tubes directly on site. As a result, you can improve your production continuously with minimal additional effort, adapting quickly to changing requirements in accordance with the kaizen principle.

- Create the perfect configuration in no time at all with MTpro planning software
- Implement practical applications almost anywhere in record time with only 14 standard components
- Easy to cut, assemble, and handle
- Quickly create reliable and stable connections
- Set up new applications simply, or optimize and expand existing ones with surprisingly little effort

### Top efficiency

EcoShape combines unbeatable flexibility with consistent efficiency.

- Implement designs more efficiently using our special MTpro planning software (with 2-D and 3-D display and a parts list generator)
- Configure and assemble directly on-site – saves time and avoids errors (poka yoke)
- Achieve higher stability thanks to optimized profile and connector geometries – with an approximate reduction in weight of over 30% compared to similar steel tube systems
- Create perfect, multi-system combinations with aluminum profiles and Manual Production Systems from Rexroth
- Reduce energy consumption and protect the environment: elements can be reused or recycled
- Ensure safe conductivity of all components thanks to a complete ESD version



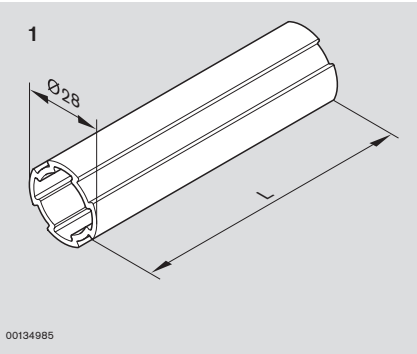
## Tubular Framing System



Use the MT*pro* software to create optimum designs in 2-D or 3-D and perfectly forecast your material requirements with the parts list generator.

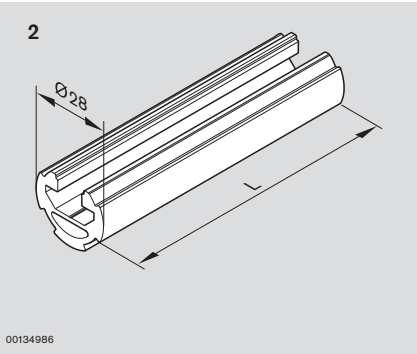
Tubular Framing System

EcoShape: D28L round tube and accessories



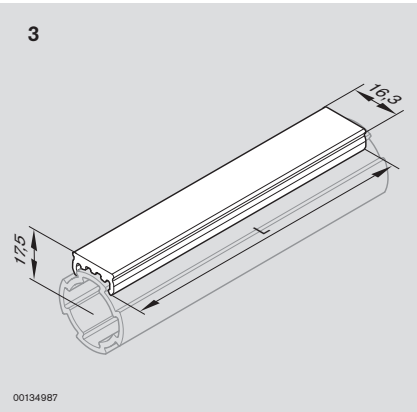
D28L round tube		
LE	No.	
50	3 842 541 211	
	L = 5600 mm	
LE	No.	
1	3 842 996 191 / ...	
	50 mm ≤ L ≤ 5600 mm	

A	=	1.8 cm <sup>2</sup>
I <sub>x</sub>	=	1.33 cm <sup>4</sup>
I <sub>y</sub>	=	1.33 cm <sup>4</sup>
W <sub>x</sub>	=	0.95 cm <sup>3</sup>
W <sub>y</sub>	=	0.95 cm <sup>3</sup>
m	=	0.48 kg/m



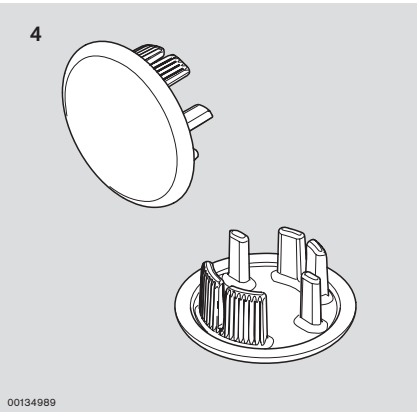
D28L, N10 round tube		
LE	No.	
20	3 842 541 213	
	L = 5600 mm	
LE	No.	
1	3 842 996 192 /...	
	50 mm ≤ L ≤ 5600 mm	

A	=	2.63 cm <sup>2</sup>
I <sub>x</sub>	=	1.17 cm <sup>4</sup>
I <sub>y</sub>	=	1.97 cm <sup>4</sup>
W <sub>x</sub>	=	0.84 cm <sup>3</sup>
W <sub>y</sub>	=	1.41 cm <sup>3</sup>
m	=	0.71 kg/m



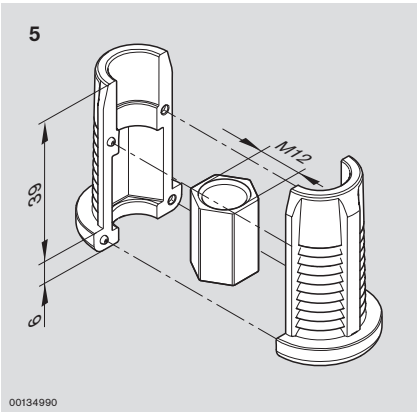
Slide rail		
	LE	No.
	10	<b>3 842 541 196</b>
		L = 2000 mm

Material: PVC, gray



Cap		
20	3 842 541 195	

Material: PA 66, black

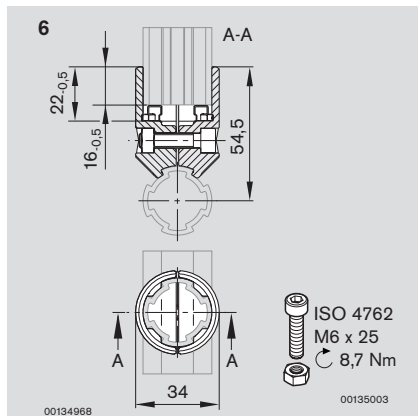


D28L threaded sleeve		
20	3 842 541 185	

Material: PA 66, black

## Tubular Framing System

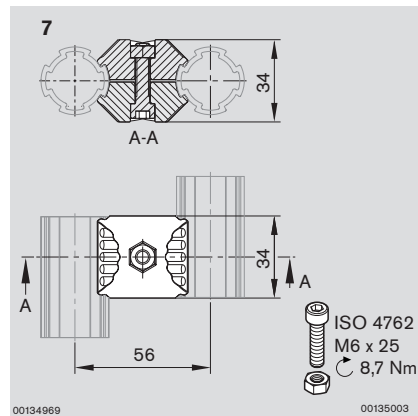
## EcoShape: round tube connector



90° connector

	No.
20	3 842 541 173

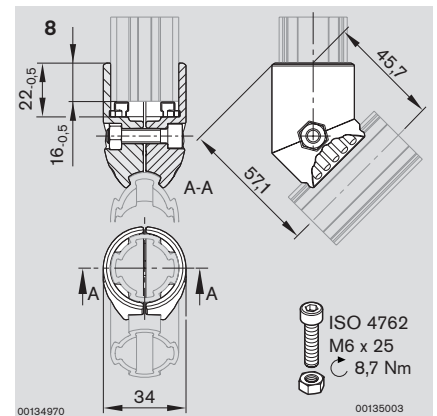
Incl. mounting material  
Material: diecast zinc



Parallel connector

	No.
20	3 842 541 183

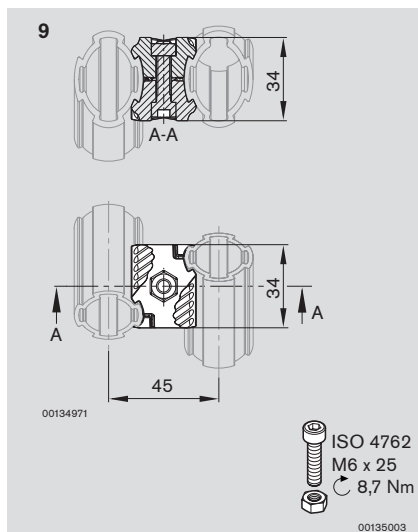
Incl. mounting material  
Material: diecast zinc



45° connector

	No.
20	3 842 541 175

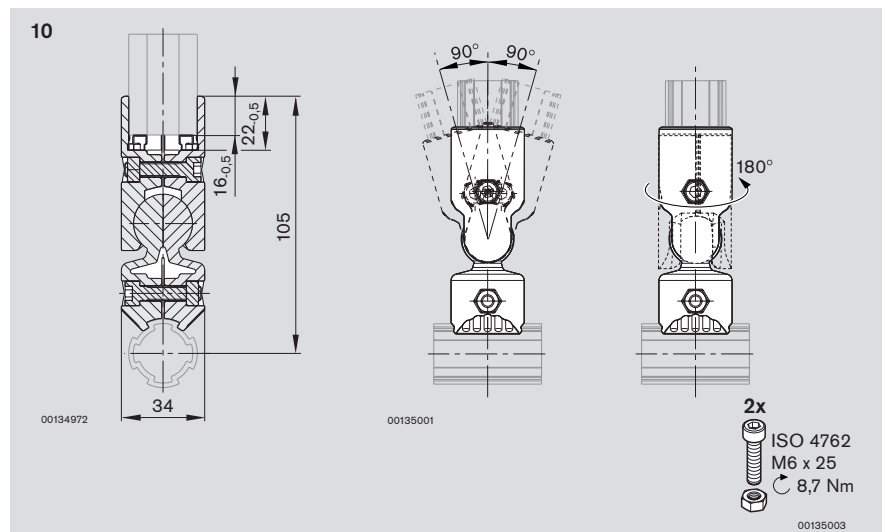
Incl. mounting material  
Material: diecast zinc



Cross connector

	No.
20	3 842 541 181

Incl. mounting material  
Material: diecast zinc



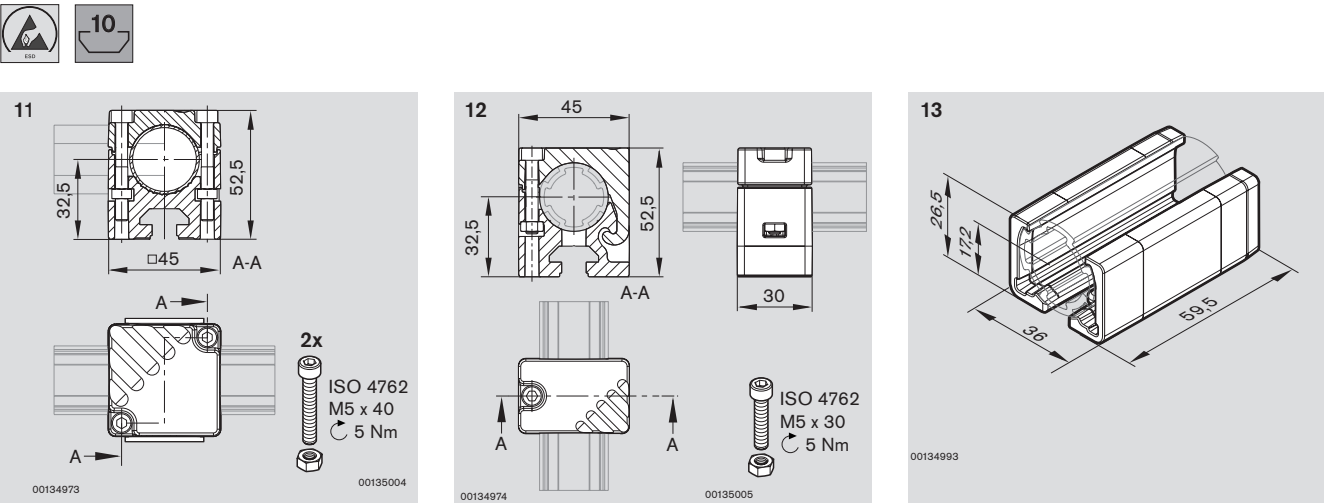
0°-90° connector

	No.
20	3 842 541 178

Incl. mounting material  
Material: diecast zinc

Tubular Framing System

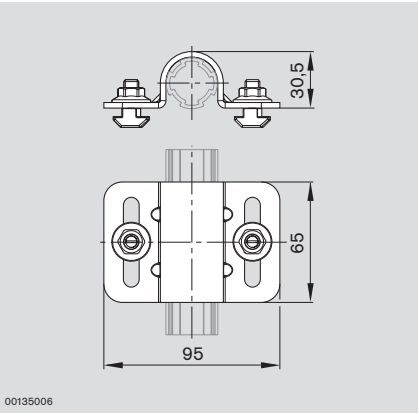
# EcoShape: round tube adapter



N10, 45 adapter	
	No.
20	3 842 541 187
Incl. mounting material	
Material: diecast aluminum	

N10, 30 adapter	
	No.
20	3 842 541 190
Incl. mounting material	
Material: diecast zinc	

XLean holder adapter	
	No.
20	3 842 541 296
Material: PA 66, black	



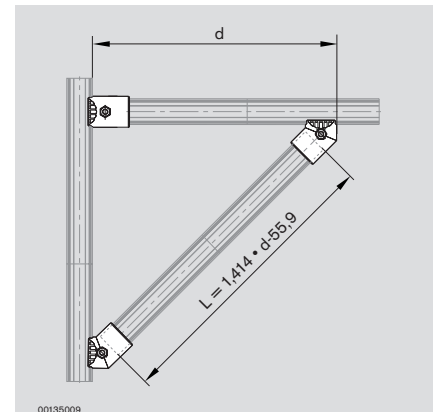
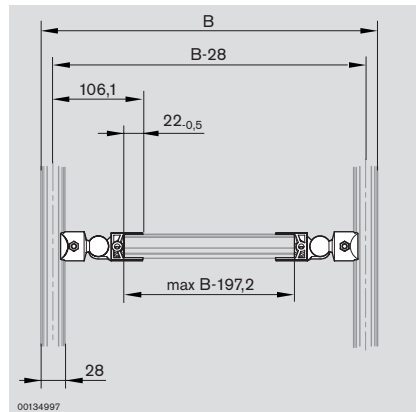
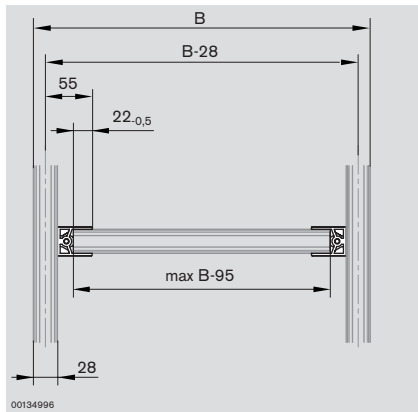
D28L/N10 tube clip	
	No.
20	3 842 541 193
Incl. mounting material	



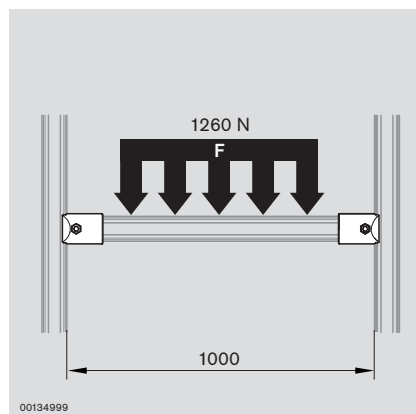
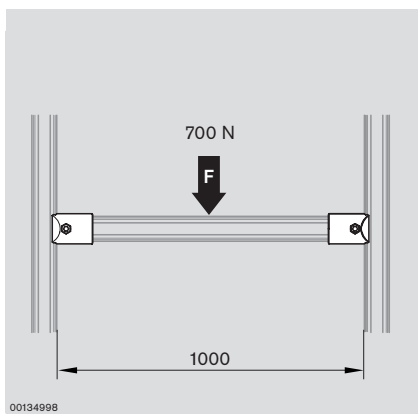
## Tubular Framing System

## Technical data

## Length calculation



## Bearing loads and surface loads



## Tubular Framing System

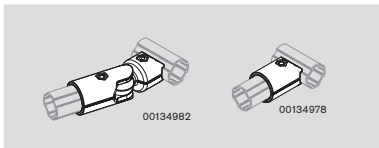
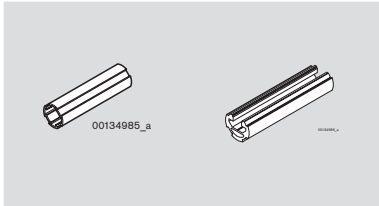
## Modular product system for flow rack construction

These two pages contain a small selection of products from our Manual Production Systems (MPS) and Basic

Mechanical Elements (MGE) ranges that can be used in conjunction with our new EcoShape tubular framing system.

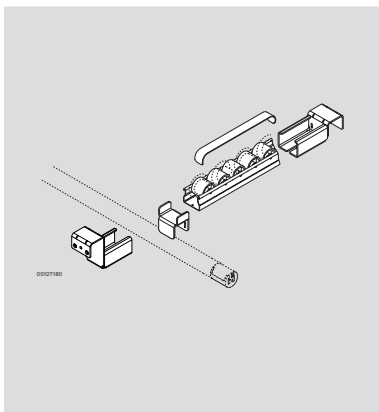
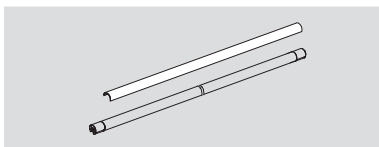
Use the info fax on the last page to order a catalog or visit us on the Internet at [www.boschrexroth.com/dcl](http://www.boschrexroth.com/dcl).

## Tubular Framing System



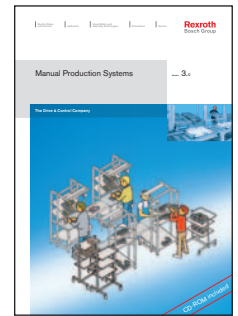
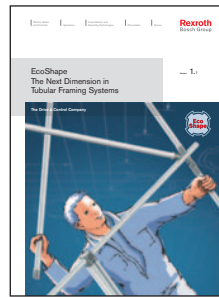
Product designation	Length (mm)	Order no.	Page
D28L round tube	L = 5600	3 842 541 211	6
D28L round tube	50 ≤ L ≤ 5600	3 842 996 191/...	6
D28L, N10 round tube	L = 5600	3 842 541 213	6
D28L, N10 round tube	50 ≤ L ≤ 5600	3 842 996 192/...	6
Cover profile		3 842 541 196	6
Cap		3 842 541 195	6
D28L threaded sleeve		3 842 541 185	6
90° connector		3 842 541 173	7
Parallel connector		3 842 541 183	7
45° connector		3 842 541 175	7
Cross connector		3 842 541 181	7
0°-90° connector		3 842 541 178	7
N10, 45 adapter		3 842 541 187	8
N10, 30 adapter		3 842 541 190	8
XLean holder adapter		3 842 541 296	8

## Manual Production Systems 3.0

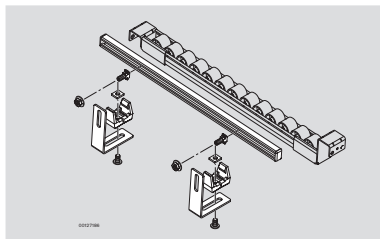
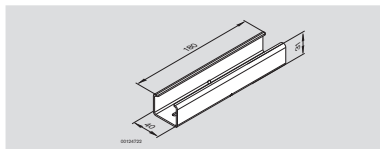
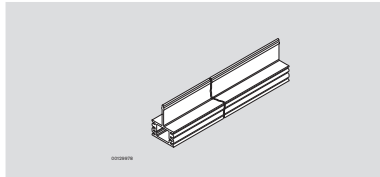


Product designation	Length (mm)	Order no.	Page
Lettering clip for tubular cross tie	L = 2000	3 842 535 136	3-45
Lettering clip for tubular cross tie	L = 102	3 842 538 093	3-45
D28 round tube	30 ≤ L ≤ 6000	3 842 993 317/...	3-40
D28 round tube	L = 6070	3 842 535 118	3-40
D28 roller section	100 ≤ L ≤ 4500	3 842 993 321/...	3-47
D28, ESD roller section	100 ≤ L ≤ 4500	3 842 993 431/...	3-47
D28 roller section	L = 4500	3 842 537 776	3-47
D28, ESD roller section	L = 4500	3 842 537 778	3-47
D28SK roller section	100 ≤ L ≤ 4500	3 842 993 322/...	3-47
D28SK, ESD roller section	100 ≤ L ≤ 4500	3 842 993 432/...	3-47
D28SK roller section	L = 4500	3 842 537 777	3-47
D28SK, ESD roller section	L = 4500	3 842 537 779	3-47
Brake		3 842 532 871	3-47
Rail holder with stop		3 842 538 372	3-47
Rail holder without stop		3 842 537 687	3-47
Mount		3 842 537 657	3-47
D28 tube clip		3 842 535 364	3-57

## Tubular Framing System

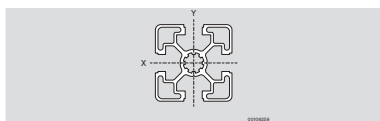
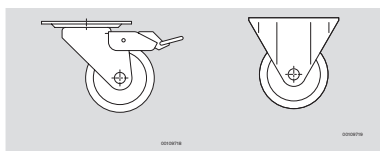
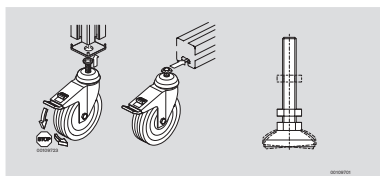


## Manual Production Systems 3.0



Product designation	Length (mm)	Order no.	Page
Polymer profile	$30 \leq L \leq 3000$	<b>3 842 993 615/...</b>	3-42
Polymer profile, ESD	$30 \leq L \leq 3000$	<b>3 842 993 617/...</b>	3-42
Polymer profile	$L = 3000$	<b>3 842 538 108</b>	3-42
Polymer profile, ESD	$L = 3000$	<b>3 842 538 107</b>	3-42
Rail holder with stop		<b>3 842 538 051</b>	3-42
Rail holder without stop		<b>3 842 538 050</b>	3-42
XLean mount		<b>3 842 538 102</b>	3-42
M6, P60 - P 30 bracket set		<b>3 842 537 862</b>	2-26
Section link		<b>3 842 536 722</b>	3-48
Bridge		<b>3 842 536 724</b>	3-48
Flexible bridge		<b>3 842 537 911</b>	3-48
Adapter, ESD		<b>3 842 537 022</b>	3-49
Mounting bracket		<b>3 842 535 125</b>	3-49
Profile 15x22.5	$30 \leq L \leq 3000$	<b>3 842 992 473/...</b>	3-49
Profile 15x22.5	$L = 2000$	<b>3 842 513 576</b>	3-49
Cap, ESD		<b>3 842 537 594</b>	3-49

## Basic Mechanical Elements 12.0



Product designation	Length (mm)	Order no.	Page
Caster wheel with lock		<b>3 842 541 226</b>	6-13
Caster wheel		<b>3 842 541 234</b>	6-13
Leveling foot		<b>3 842 529 025</b>	6-4
Leveling foot		<b>3 842 352 061</b>	6-4
Roller		<b>3 842 259 790</b>	6-18
Roller		<b>3 842 259 792</b>	6-18
45x45L profile		<b>3 842 992 425/...</b>	2-35

## Tubular Framing System

## MTpro planning software

**MTpro is a software used for planning assembly systems that assists you from selection to configuration and ordering of the Rexroth products.**

The DVD includes:

**Layout Designer for planning and designing complete frames and conveyor systems without a CAD system**

- Simple design using the drag & drop and snap functions without a CAD system
- Design rules to support users in the creation of complete systems
- User library to save and reuse your own modules and layouts
- Export of 3-D volume models into all common CAD systems
- Automatic order list generation of all small parts and accessories

**Product information for the following product lines:**

- MGE Basic Mechanical Elements
- MPS Manual Production Systems
- MIT Material and Information Flow Technology

**Product configuration and calculation of order lists**

**Generation of CAD models with direct interfaces to all common CAD systems**

- Export of configured models into the most popular file formats
- Multifunctional drivers allow you to insert the configured CAD models with parts list information directly in your current drawing
- Edit the properties of CAD models you have already configured and inserted in your CAD drawing in supported CAD systems

– Multilingual content and graphical user interface in 5 different languages (de/en/fr/es/it)

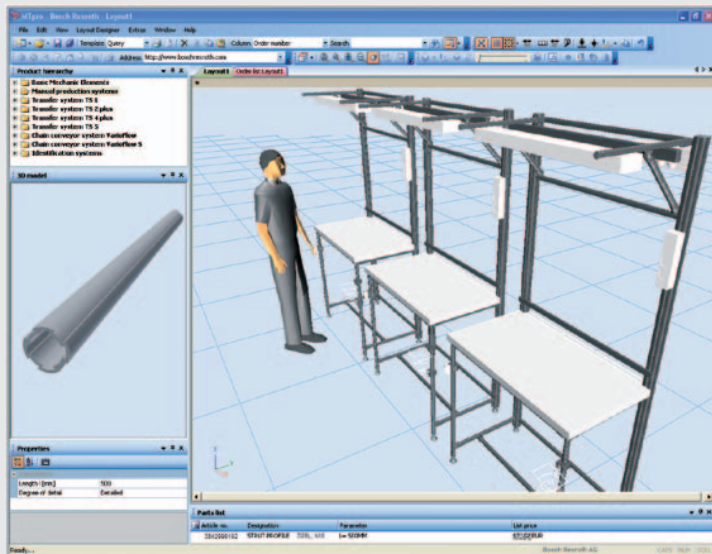
– MTpro runs directly from DVD-ROM without installation

– Update your installation of MTpro online with the automatic update system

**System requirements:**

- Windows 2000, Windows XP, Windows Vista
- Adobe Reader 6.0 and newer
- 2.5 GB of hard disk space needed for installation

The DVD-ROM MTpro 2.0 can be ordered free of charge with the part number 3 842 539 057 from your local Rexroth sales partner.



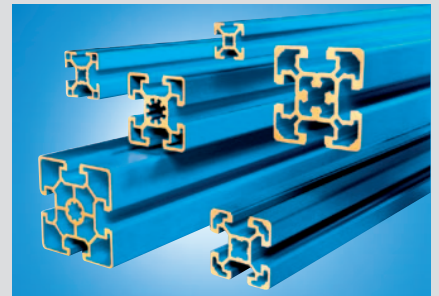
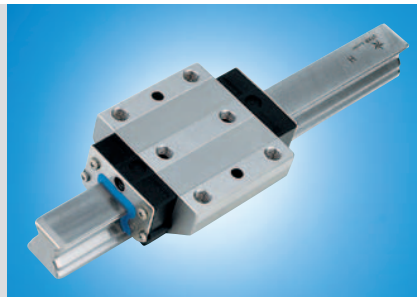
# Linear Motion and Assembly Technologies

**Please send me/us, without any obligation, more information about:**

- ☐ Ball Rail Systems
- ☐ Roller Rail Systems
- ☐ Linear Bushings and Shafts

- ☐ Ball Screw Drives
- ☐ Linear Motion Systems

- ☐ Basic Mechanical Elements
- ☐ Manual Production Systems
- ☐ Transfer Systems



Sender

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Subject to technical modifications

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