



# Compact Linear Motion Systems

Smooth. Reliable. Built for Demanding Spaces.

## Technical Product Catalogue

TI-L-8000.1 / E

### Product Range

- ECO-Runner Track Roller Guides
- INOX-Runner Stainless Steel Guides
- TELESCOPIC-Runner Bearings
- EASY-Runner Linear Ball Bearings
- FLEXY-Runner Curve Guidance Systems

Distributed by



# Index

## Table of Contents

<b>1. Introduction .....</b>	<b>4</b>
<b>1.1 Areas of Application .....</b>	<b>4</b>
<b>1.2 Quality Management .....</b>	<b>4</b>
<b>2. ECO-Runner Track Roller Guides.....</b>	<b>5</b>
<b>2.1 Product Description.....</b>	<b>5</b>
<b>2.2 Applications .....</b>	<b>5</b>
<b>2.3 Key Features.....</b>	<b>5</b>
<b>2.4 System Components Overview .....</b>	<b>6</b>
<b>2.5 Linear Sliders - CN Series (Standard).....</b>	<b>6</b>
CN 43-21 (3-Roller) Fixed Slider - AXS.....	7
CN 43-32 (5-Roller) Fixed Slider - AXS.....	8
<b>2.6 Linear Sliders - CL Series (Standard) .....</b>	<b>9</b>
CL 28-32 (5-Roller) Standard Fixed Slider – AXS .....	9
CL 28-32 (5-Roller) Standard Float Slider - AUS.....	10
<b>2.7 Linear Sliders - CS Series (Slim) .....</b>	<b>11</b>
CS 43-21 (3-Roller) Slim Fixed Slider - AX.....	11
CS 43-32 (5-Roller) Slim Fixed Slider - AX.....	12
<b>2.8 Linear Rails - LCX and LCU Series .....</b>	<b>13</b>
LCX/LCU 43 Series Rail Lengths.....	16
<b>2.9 Track Rollers - CBRS Series.....</b>	<b>16</b>
<b>2.10 ECO-Runner Load Rating Summary.....</b>	<b>17</b>
<b>2.11 Designation System .....</b>	<b>17</b>
<b>3. INOX-Runner Stainless Steel Guides.....</b>	<b>18</b>
<b><i>IBC INOX-Runner is an innovative runner system manufactured entirely from stainless steel. The use of V4A grade stainless steel (AISI 316L / 1.4404) provides high corrosion protection, suitable for maritime and seawater-resistant applications.....</i></b>	
<b>3.1 Key Features .....</b>	<b>18</b>
<b>3.2 Technical Specifications.....</b>	<b>18</b>
<b>3.3 INOX-Runner Components .....</b>	<b>19</b>
S-CB 45-21 Concentric Roller Block.....	19
<b>4. TELESCOPIC-Runner Bearings.....</b>	<b>20</b>
<b>Typical Applications.....</b>	<b>20</b>



- LCAE - Telescopic-Runner .....20
- LCAS - Telescopic-Runner ..... 21
- 5. EASY-Runner Linear Ball Bearings ..... 22**
  - 5.1 Product Description..... 22
  - 5.2 Applications ..... 22
  - 5.3 Designs ..... 23
  - 5.4 Technical Properties..... 23
    - 5.4.1 Materials..... 23
    - 5.4.2 Surface Platings..... 23
    - 5.4.3 Lubrication ..... 24
    - 5.4.4 Technical Specifications Summary ..... 24
  - 5.5 Product Overview - LCE 28H Series..... 24
  - 5.6 Product Overview - LCE 35 Series ..... 25
  - 5.7 Product Overview - LCE 43 Series ..... 26
  - 5.8 Mounting Advice..... 27
    - Fitting Position..... 27
    - End Stops..... 27
    - Fastening Screws ..... 27
    - Cage Slip ..... 27
  - 5.9 Designation System ..... 28
  - 5.10 ATCoat Coating Option ..... 28
- 6. FLEXY-Runner Curve Guidance Systems ..... 29**
  - 6.1 Product Description ..... 29
  - 6.2 Applications ..... 29
  - 6.3 Key Features..... 29
  - 6.4 Technical Specifications ..... 30
  - 6.5 Materials..... 31
  - 6.6 Load Ratings..... 31
  - 6.7 Carriage Dimensions..... 31
    - Carriage Dimension Table ..... 31
  - 6.8 Custom Solutions..... 31

## 1. Introduction

**IBC Wälzlager GmbH**, Industrial Bearings and Components, continues in the tradition of Robert Kling Wetzlar GmbH, a company founded in 1918. IBC is widely known for producing high precision rolling bearings used in machine tools, separators, centrifuges, compressors, gear boxes, printing machines, textile machines and high-speed units.

IBC started its Linear Guidance Systems division to complement the well-known and time-tested range of rotational rolling bearings. By continuously developing and improving its product range, IBC has evolved into one of the leading manufacturers of linear motion bearings and telescopic linear motion bearings.

IBC produces linear motion bearings that are guided in rails with an X- or U-profile and an internal raceway. This technology allows for very compact and space-saving systems. The most common choices are the Telescopic-Runner telescopic linear motion bearings, the Easy-Runner linear ball bearings, and the track roller linear guidance systems.

### 1.1 Areas of Application

- Machine tool industry
- Printing machine industry
- Automotive suppliers
- Mechanical engineering and plant construction
- Packaging machine industry
- Food and beverage industry
- Medical technology
- Railway supply industry
- Warehouse logistics

### 1.2 Quality Management

Constant quality controls integrated within the manufacturing process ensure the consistently high-quality level of all IBC products. The quality management system is implemented and certificated according to DIN EN ISO 9001 for the design, development, manufacturing and distribution of rolling bearings and linear guides.



## 2. ECO-Runner Track Roller Guides



### 2.1 Product Description

**IBC ECO-Runner** roller guides enable reliable and economical linear movement of assemblies and components. They are characterised by low-maintenance operation, long service life, low-noise running, and ease of installation.

Compared to telescopic roller bearings, the ECO-Runner carriage system allows much longer running distances, determined by the length of the support rail minus the length of the carriage. The carriages travel within a C-shaped rigid profile rail, providing excellent guidance and load-bearing capability.

**The track rollers run backlash-free over four contact points, ensuring quiet operation at high loads and speeds while maintaining precise linear motion.**

### 2.2 Applications

Typical applications include:

- Machine tools and production equipment manufacturing
- Warehouse logistics and automated storage/retrieval systems
- Transport engineering (drawers, access panels, battery boxes)
- Medical technology and laboratory equipment
- Clean-room or hygiene-sensitive environments
- Applications requiring compact, precise linear motion

### 2.3 Key Features

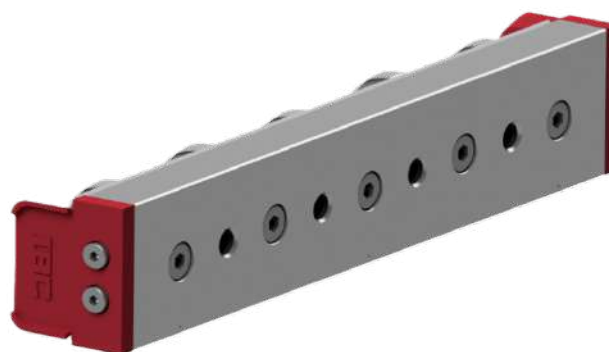
- Compact design for tight installation spaces
- Track rollers run backlash-free over four contact points
- Quiet running at high loads and speeds
- Wipers and seals for contamination protection
- Longer strokes than telescopic systems
- Retrofit-friendly design
- Rails can be cut to exact size requirements

## 2.4 System Components Overview

The ECO-Runner system consists of three main component types: Rails, Sliders, and Rollers. Each component is available in multiple configurations to suit different application requirements.

Component Type	Description
CN Slider	Heavy-duty linear slider for maximum load capacity and rigidity – available in 3-roller (3R) and 5-roller (5R) configurations.
CL Slider	Standard fixed slider – compact body style for ECO-Runner systems. Available in 3-roller (3R) and 5-roller (5R) configurations and sizes 28 and 43.
CS Slider	Slim linear slider with reduced installation height – available in 3-roller (3R) and 5-roller (5R) configurations.
LCX Rail	Fixed Linear Rail (locating bearing function)
LCU Rail	Float Linear Rail (non-locating/loose fit bearing)
CBRS Roller	Concentric Roller - even rotation around central axis
CBRE Roller	Eccentric Roller - adjustable for fine-tuning clearance
Available Sizes	28, 43

## 2.5 Linear Sliders - CN Series (Standard)



IBC CN and CL series sliders offer low friction, high accuracy, and excellent running performance for compact linear motion systems. CN sliders are the heavy-duty option for higher load capacities and stiffness, while CL standard fixed sliders provide a more compact body for medium-load applications and retrofits. Both series are available in 3-roller (3R) and 5-roller (5R) configurations.

**CN 43-21 (3-Roller) Fixed Slider - AXS**

Werkstoff / material:		Härte:	HRC±1
Allgemeintoleranz general tolerance		Abmaße / deviations	A4
Nennbereich range of nominal size over		0,5-3	3-6
		6-30	30-120
		120-400	400-1000
		± 0,1	± 0,1
		± 0,2	± 0,3
		± 0,5	± 0,8
Schutzvermerk ISO 16016 beachten / refer to protection notice ISO 16016		Datum / date	Name
		05.09.2025	RWetzel
		09.09.2025	JTheissen
Rad. Tragzahl Co rad / rad. capacity Co rad:		5520 [N]	
Ax. Tragzahl Co ax / ax. capacity Co ax.:		1580 [N]	
Mys :		104,7 [Nm]	
Myd :		104,7 [Nm]	
Oberfläche / surface :		-	
Maßstab / scale: 1:1,5		IBS WÄZLAGER GMBH Wetzlar-Germany	
		Bezeichnung / designation	
		Laufwagen Zus.bau / slide assembly	
		CN 43-21.2RS.AXS	
Gewicht / weight: 0,423 kg		DC Auto-Motion (PTY) LTD.	
Zeichnungsnummer / drawing no. KD		Seite / page 1 / 1	
Index:		-	
Nr./no.	Anderungen/changes	Datum/date	Name

Parameter	Value
Radial Load Capacity (Co rad)	5,520 N
Axial Load Capacity (Co ax)	1,580 N
Moment Capacity (Mys / Myd)	104.7 Nm
Weight	0.423 kg
Overall Length	148 mm
Mounting Length	134 mm
Profile Width	43 mm
Profile Height	40 mm
Fasteners	4x M8

### CN 43-32 (5-Roller) Fixed Slider - AXS

Werkstoff / material:		Härte:	HRC± 1
Allgemeintoleranz general tolerance		Abmaße / deviations	A4
0,5-3	3-6	6-30	30-120
120-400	400-1000		
Schutzvermerk ISO 16016 beachten / refer to protection notice ISO 16016		Maßstab / scale: 1:1,5	IBC WÄLZLAGER GMBH Wetzlar-Germany
Datum / date		Name	Bezeichnung / designation
Erstellt / drawn: 05.09.2025		RWetzel	Laufwagen Zus.bau / slide assembly
Geprüft / checked: 09.09.2025		JTheissen	<b>CN 43-32.2RS.AXS</b>
Rad. Tragzahl Co rad / rad. capacity Co rad:		Gewicht / weight:	DC Auto-Motion (PTY) LTD.
Ax. Tragzahl Co ax / ax. capacity Co ax.:		0,662 kg	Seite / page: 1 / 1
Mys :		Zeichnungsnummer / drawing no.	
Myd :		KD	
Nr./no.		Index:	
Änderungen/changes		-	
Datum/date			
Name			

Parameter	Value
Radial Load Capacity (Co rad)	6,560 N
Axial Load Capacity (Co ax)	2,220 N
Moment Capacity (Mys / Myd)	313,8 Nm
Weight	0,662 kg
Overall Length	214 mm
Mounting Length	200 mm
Profile Width	43 mm
Profile Height	40 mm
Fasteners	4x M8

## 2.6 Linear Sliders - CL Series (Standard)

The CL series standard fixed sliders are compact, medium-load carriages designed for ECO-Runner systems. They provide a balanced combination of rigidity, smooth running and size efficiency in applications where a full heavy-duty CN body is not required. CL sliders are available in 3-roller (3R) and 5-roller (5R) configurations and in sizes 28 and 43 to suit a wide range of machine layouts and retrofit requirements.

### CL 28-32 (5-Roller) Standard Fixed Slider – AXS

Werkstoff / material:		Härte:		HRC± 1	
Allgemeintoleranz general tolerance		Nennabereich über range of nominal size over		A4	
DIN ISO 2768-mS		Abmaße / deviations		± 0,1	
		0,5-3		± 0,1	
		3-6		± 0,2	
		6-30		± 0,3	
		30-120		± 0,5	
		120-400		± 0,8	
		400-1000			
		Schutzvermerk ISO 16016 beachten / refer to protection notice ISO 16016		Maßstab / scale: 1:1	
		Datum / date		Name	
		Erstellt / drawn: 03.12.2025		R. Wetzel	
Rad. Tragzahl Co rad / rad. load Co rad.:		2630 [N]		IBS WÄLZLAGER GMBH Wetzlar-Germany	
Ax. Tragzahl C ax / ax. load C ax.:		919 [N]		Bezeichnung / designation	
Myl:		84,10 [Nm]		Laufwagen Zus.bau / slide assembly	
Myr:		84,10 [Nm]		KD-CL 28-32.RS.AXS	
Oberfläche / surface:		AlZnMgCu 1.5		Gewicht / weight: 0,190 kg	
Nr./no.		Änderungen/changes		DC Auto-Motion (PTY) LTD.	
Datum/date		Name		Seite / page: 1 / 1	
				Zeichnungsnummer / drawing no. KD	
				Index:	

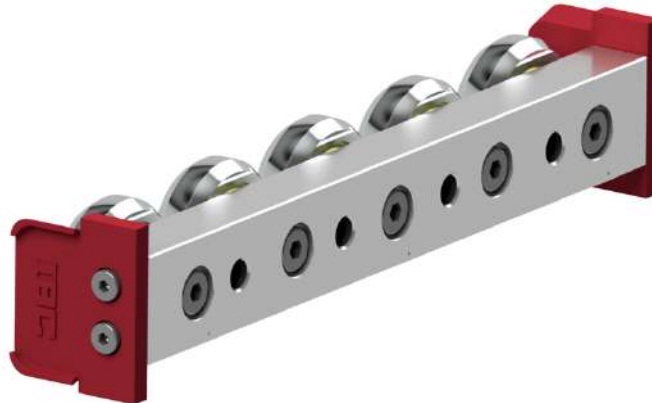
Parameter	Value
Radial Load Capacity (Co rad)	2630 N
Axial Load Capacity (Co ax)	919 N
Moment Capacity (Mys / Myd)	84.1 Nm
Weight	0.190 kg
Overall Length	139 mm
Mounting Length	125 mm
Profile Width	28 mm
Profile Height	25 mm
Fasteners	4x M5

### CL 28-32 (5-Roller) Standard Float Slider - AUS

Werkstoff / material:		Härte: HRC± 1	
Allgemeintoleranz general tolerance	DN ISO 2768-mS	Normalbereich range of nominal size over	A4
	Abmaße / deviations	0,5-3 ± 0,1	3-6 ± 0,1
		6-30 ± 0,2	30-120 ± 0,3
		120-400 ± 0,5	400-1000 ± 0,8
Schutzvermerk ISO 16016 beachten / refer to protection notice ISO 16016		Maßstab / scale: 1:1	IBC WÄLZLAGER GMBH Wetzlar-Germany
Datum / date		Name	Bezeichnung / designation Laufwagen Zus.bau / slide assembly
Erstellt / drawn: 03.12.2025		RWetzel	KD-CL 28-32.RS.AUS
Gewicht / weight: 0.190 kg		DC Auto-Motion (PTY) LTD.	
Oberfläche / surface: AlZnMgCu 1S		Zeichnungsnummer / drawing no. KD	
Rad. Tragzahl Co rad / rad. load Co rad.:	2630 [N]	Seite / page: 1 / 1	
Myl :	84,10 [Nm]	Index:	
Myr :	84,10 [Nm]		
Nbr./no. Änderungen/changes		Datum/date	
		Name	

Parameter	Value
Radial Load Capacity (Co rad)	2,630 N
Axial Load Capacity (Co ax)	-
Moment Capacity (Mys / Myd)	84.1 Nm
Weight	0.190 kg
Overall Length	139 mm
Mounting Length	125 mm
Profile Width	28 mm
Profile Height	25 mm
Fasteners	4x M5

## 2.7 Linear Sliders - CS Series (Slim)



The CS series slim sliders are available in 3R and 5R configurations, providing a compact profile for space-constrained applications while maintaining excellent load capacity. The reduced height (25 mm vs 40 mm) makes them ideal for applications with limited vertical clearance.

### CS 43-21 (3-Roller) Slim Fixed Slider - AX

Werkstoff / material:						Härte:	HRC± 1
Allgemeintoleranz DIN 7168						0,5-3	3-6
general tolerance mittel						± 0,1	± 0,1
Schutzvermerk ISO 16016 beachten / refer to protection notice ISO 16016						Maßstab / scale: IBC WÄLZLAGER GMBH Wetzlar-Germany	
Erstellt / drawn: 05.09.2025 R.Wetzel						Bezeichnung / designation: Laufwagen Zus.bau / slide assembly	
Geprüft / checked: 09.09.2025 J.Theissen						CS 43-21.2RS.AX	
Gewicht / weight: 0,338 kg						DC Auto-Motion (PTY) LTD.	
Zeichnungsnummer / drawing no. KD						Seite / page: 1 / 1	
Index:							

Rad. Tragzahl Co rad / rad. capacity Co rad:	5520 [N]
Ax. Tragzahl C ax. / ax. capacity C ax.:	1580 [N]
Mys:	104,70 [Nm]
Myd:	104,70 [Nm]

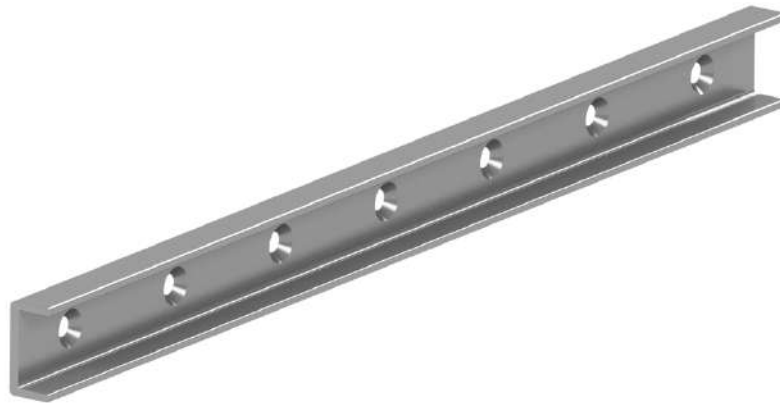
Parameter	Value
Radial Load Capacity (Co rad)	5.520 N
Axial Load Capacity (Co ax)	1.580 N
Moment Capacity (Mys / Myd)	104.70 Nm
Weight	0.338 kg
Overall Length	134 mm
Mounting Length	120 mm
Profile Width	43 mm
Profile Height	25 mm
Fasteners	2x M8

**CS 43-32 (5-Roller) Slim Fixed Slider - AX**

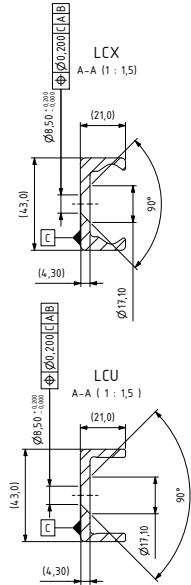
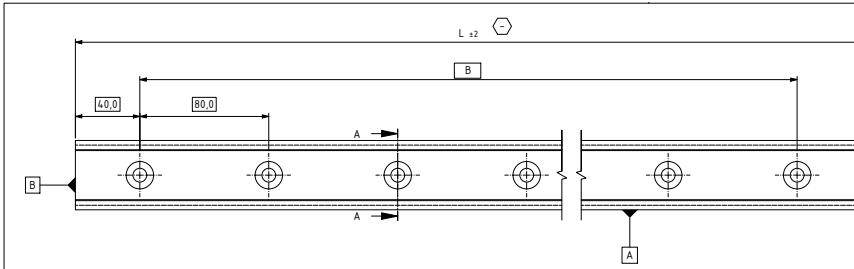
Werkstoff / material:		Härte / hardness:	HRC±1
Allgemeintoleranz / general tolerance	DIN 7168 mittelt	A4	
Nennmaßbereich über range of nominal size over		0,5-3 3-6 6-30 30-120 120-400 400-1000	
Abmaße / deviations		± 0,1 ± 0,1 ± 0,2 ± 0,3 ± 0,5 ± 0,8	
Schutzvermerk ISO 16016 beachten / refer to protection notice ISO 16016		Maßstab / scale:	IBC WÄZLAGER GMBH Wetzlar-Germany
Datum / date		Name	Bezeichnung / designation
Erstellt / drawn: 05.09.2025		RWetzel	Laufwagen Zus.bau / slide assembly
Geprüft / checked: 09.09.2025		JTheissen	<b>CS 43-32.2RS.AX</b>
		Gewicht / weight:	DC Auto-Motion (PTY) LTD.
		0,540 kg	Seite / page: 1 / 1
		Zeichnungsnummer / drawing no.	Index:
		IBC	KD

Parameter	Value
Radial Load Capacity (Co rad)	6,560 N
Axial Load Capacity (Co ax)	2,220 N
Moment Capacity (Mys / Myd)	313.80 Nm
Weight	0.540 kg
Overall Length	204 mm
Mounting Length	190 mm
Profile Width	43 mm
Profile Height	25 mm
Fasteners	4× M8

## 2.8 Linear Rails - LCX and LCU Series



Quiet, durable, and easy to install — the LCX (Fixed) and LCU (Float) rails are supplied with CN series rollers in 3 to 5 roller options and can be cut to your exact size requirements.



Designation	L [mm]	number of holes	B = ((number of holes - 1) x 80 mm)
LCX/LCU 43-0400.V	400	5	320
LCX/LCU 43-0480.V	480	6	400
LCX/LCU 43-0560.V	560	7	480
LCX/LCU 43-0640.V	640	8	560
LCX/LCU 43-0720.V	720	9	640
LCX/LCU 43-0800.V	800	10	720
LCX/LCU 43-0880.V	880	11	800
LCX/LCU 43-0960.V	960	12	880
LCX/LCU 43-1040.V	1040	13	960
LCX/LCU 43-1120.V	1120	14	1040
LCX/LCU 43-1200.V	1200	15	1120
LCX/LCU 43-1280.V	1280	16	1200
LCX/LCU 43-1360.V	1360	17	1280
LCX/LCU 43-1440.V	1440	18	1360
LCX/LCU 43-1520.V	1520	19	1440
LCX/LCU 43-1600.V	1600	20	1520
LCX/LCU 43-1680.V	1680	21	1600
LCX/LCU 43-1760.V	1760	22	1680
LCX/LCU 43-1840.V	1840	23	1760
LCX/LCU 43-1920.V	1920	24	1840
LCX/LCU 43-2000.V	2000	25	1920
LCX/LCU 43-2080.V	2080	26	2000
LCX/LCU 43-2160.V	2160	27	2080
LCX/LCU 43-2240.V	2240	28	2160
LCX/LCU 43-2320.V	2320	29	2240
LCX/LCU 43-2400.V	2400	30	2320
LCX/LCU 43-2480.V	2480	31	2400
LCX/LCU 43-2560.V	2560	32	2480
LCX/LCU 43-2640.V	2640	33	2560
LCX/LCU 43-2720.V	2720	34	2640
LCX/LCU 43-2800.V	2800	35	2720
LCX/LCU 43-2880.V	2880	36	2800
LCX/LCU 43-2960.V	2960	37	2880
LCX/LCU 43-3040.V	3040	38	2960
LCX/LCU 43-3120.V	3120	39	3040
LCX/LCU 43-3200.V	3200	40	3120
LCX/LCU 43-3280.V	3280	41	3200
LCX/LCU 43-3360.V	3360	42	3280
LCX/LCU 43-3440.V	3440	43	3360
LCX/LCU 43-3520.V	3520	44	3440
LCX/LCU 43-3600.V	3600	45	3520

Werkstoff / material 58 CrMoV4 oder E153		Härte / hardness HRCE 1			
Allgemeintoleranz general tolerance		A3			
Abstände / deviances		0.5-3	3-6	6-30	30-100
		± 0.1	± 0.1	± 0.2	± 0.3
		± 0.3	± 0.5	± 0.8	
Schutzvermerk ISO 16016 beachten / refer to protection notice ISO 16016		Maßstab / scale: 1:2			
Datum / date Name		IBS WÄLZLAGER GMBH Wetzlar-Germany			
Erstellt geprüft freigegeben		Bezeichnung / designation Linearprofil (außen) / Linear rail			
09.09.2025 RWetzel		LCX-LCU 43-table-drawing.V			
Gewicht / weight 2,62kg/m		Blatt / page 1			
Zeichnungsnummer / drawing no. KD		Index -			
Nr./no.	Änderungen/changes	Datum/date	Name		





## Rail Technical Specifications

Parameter	Value
Material	58 CrMoV4 or Cf53 steel
Weight	5.62 kg/m
Available Sizes	28, 43
Rail Lengths	400 mm to 3,600 mm
Hole Spacing	80 mm standard
Edge Distance	40 mm
Hardness	HRC $\pm$ 1

## LCX/LCU 28 Series Rail Lengths

Designation	Length L (mm)	No. of Holes	Dimension B (mm)
LCX/LCU 28-0240.V	240	3	160
LCX/LCU 28-0400.V	400	5	320
LCX/LCU 28-0560.V	560	7	480
LCX/LCU 28-0800.V	800	10	720
LCX/LCU 28-1040.V	1,040	13	960
LCX/LCU 28-1600.V	1,600	20	1,520
LCX/LCU 28-2000.V	2,000	25	1,920
LCX/LCU 28-2400.V	2,400	30	2,320
LCX/LCU 28-3200.V	3,200	40	3,120

Note:  $B = (\text{number of holes} - 1) \times 80 \text{ mm}$ . Additional lengths available in 80 mm increments.

## LCX/LCU 43 Series Rail Lengths

Designation	Length L (mm)	No. of Holes	Dimension B (mm)
LCX/LCU 43-0400.V	400	5	320
LCX/LCU 43-0560.V	560	7	480
LCX/LCU 43-0800.V	800	10	720
LCX/LCU 43-1040.V	1,040	13	960
LCX/LCU 43-1600.V	1,600	20	1,520
LCX/LCU 43-2000.V	2,000	25	1,920
LCX/LCU 43-2400.V	2,400	30	2,320
LCX/LCU 43-3200.V	3,200	40	3,120
LCX/LCU 43-3600.V	3,600	45	3,520

## 2.9 Track Rollers - CBRS Series

The IBC concentric roller (CBRS) is a high-precision component designed for smooth, stable, and quiet movements. It ensures the roller rotates evenly around a central axis, reducing vibration and wear while providing even load distribution.

Parameter	Value
Radial Load Capacity (Co rad)	1,790 N
Axial Load Capacity (Co ax)	950 N
Weight	0.206 kg
Block Width	30.90 mm
Block Height	45.20 mm
Block Length	40 mm
Mounting Length	120 mm / 160 mm
Fasteners	4× M6

## 2.10 ECO-Runner Load Rating Summary

The following table provides a quick reference for comparing load capacities across all ECO-Runner slider types in size 43.

Slider Type	Config	Co rad (N)	Co ax (N)	Mys/Myd (Nm)	Weight (kg)
CN 43-21.2RS.AXS	3R Fixed	5,520	1,580	104.7	0.423
CN 43-21.2RS.AUS	3R Float	5,520	-	104.7	0.423
CN 43-32.2RS.AXS	5R Fixed	6,560	2,220	313.8	0.662
CN 43-32.2RS.AUS	5R Float	6,560	-	313.8	1.051
CL 28-32.2RS.AXS	5R Std Fixed	2,630	919	84.1	0.190
CL 28-32.2RS.AUS	5R Std Float	2,630	-	84.1	0.190
CS 43-21.2RS.AX	3R Slim Fixed	5,520	1,580	104.7	0.338
CS 43-21.2RS.AU	3R Slim Float	5,520	-	104.7	0.338
CS 43-32.2RS.AX	5R Slim Fixed	6,560	2,220	313.8	0.540
CS 43-32.2RS.AU	5R Slim Float	6,560	-	313.8	0.541

Note: Float (AU/AUS) variants do not carry axial loads. 2RS = synthetic rubber seals.

## 2.11 Designation System

### Rail Designation:

LCX 43 - 2000 . V

- LCX = Fixed Rail / LCU = Float Rail
- 43 = Profile size (28, 43)
- 2000 = Rail length in mm
- V = Version indicator

### Slider Designation:

CN 43 - 21 . 2RS . AXS

- CN = Standard Slider / CS = Slim Slider
- 43 = Profile size
- 21 = 3-Roller (3R) / 32 = 5-Roller (5R)
- 2RS = Rubber seals / 2Z = Metal shields
- AX = Fixed (axial load capable) / AU = Float (radial only)
- S = With wiper seals

### 3. INOX-Runner Stainless Steel Guides



**IBC INOX-Runner** is an innovative runner system manufactured entirely from stainless steel. The use of V4A grade stainless steel (AISI 316L / 1.4404) provides high corrosion protection, suitable for maritime and seawater-resistant applications.

#### 3.1 Key Features

- V4A stainless steel (AISI 316L) construction
- Suitable for maritime applications
- FDA and EU 1935/2004 compliant versions
- Low and high temperature capability
- Blue seal (food industry) / Red seal (industrial)

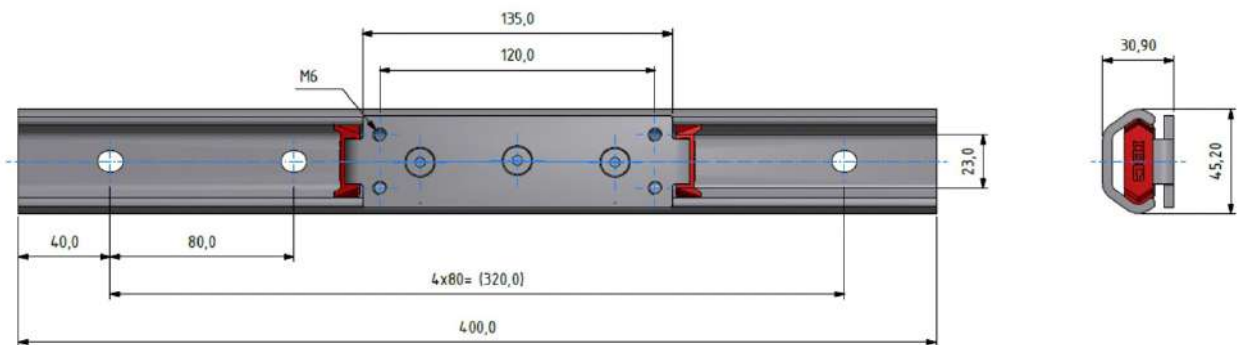
#### 3.2 Technical Specifications

Parameter	Value
Available Sizes	30, 45
Material	V4A Stainless Steel (AISI 316L)
Load Capacity	Up to 1790 N per trolley
Maximum Speed	Up to 1.5 m/s
Maximum Acceleration	Up to 2 m/s <sup>2</sup>
Certifications	FDA / USDA / EU 1935/2004

### 3.3 INOX-Runner Components

#### S-CB 45-21 Concentric Roller Block

Werkstoff / material:		Härte: - HRC±1	
Allgemeintoleranz general tolerance		A4	
DIN 7168 mittel	Normalbereich range of normal size over	0,5-3 ±0,1	über range of normal size over
	Abmaße / deviations	3-6 ±0,1	6-30 ±0,2
		30-120 ±0,3	120-400 ±0,5
		400-1000 ±0,8	
Schutzvermerk ISO 16016 beachten / refer to protection notice ISO 16016		Maßstab / scale: 1:2	IBC WÄLZLAGER GMBH Wetzlar-Germany
Datum / date		Name	Bezeichnung / designation
Erstellt / drawn 15.10.2025		RWetzel	Laufwagen / slider
Geprüft / checked 15.10.2025		TKitschke	KD S-CB 45-21.AX
Gewicht / weight: 0,206 kg		DC Auto-Motion (PTY) LTD.	
Seite / page 1		Zeichnungsnummer / drawing no. KD	
Index: -			
Rad. Tragzahl Co / rad. load Co :	1790 [N]		
Ax. Tragzahl C / ax. load C :	950 [N]		
Nr./no.	Anderungen/changes	Datum/date	Name



## 4. TELESCOPIC-Runner Bearings



**IBC TELESCOPIC-Runners** are compact, high-precision telescopic roller bearings available in full or partial extension types, with both roller-guided and cage-guided versions. The system operates by moving an inner profile within an outer rail using balls or rollers that run smoothly in guided tracks. These guides ensure precise, play-free motion thanks to four-point contact ball raceways or identical roller tracks. The design allows for low friction, enabling smooth operation with minimal force, even under high loads and speeds. Their compact size, high load capacity, rigidity, and quiet operation make them ideal for use in confined spaces.

### Typical Applications

- Transport engineering: Door opening systems, battery boxes, etc.
- Handling and automation systems
- Logistics, shelf access equipment
- Medical technology
- Installed equipment in rescue and municipal-utility vehicles
- Aerospace
- Printing machines

### LCAE - Telescopic-Runner

This series allows for full extension and features a very flat design, achieved through an improved S-shaped intermediate profile. It is distinguished by high load ratings and excellent stiffness. Variants are available for either one-way or two-way pullout. The LCAE series comes equipped with rollers, which are especially beneficial for vertical applications, high travel speeds, or environments with contamination.



**Available sizes:** LCAE 28H, LCAE 35, LCAE 43

### **LCAS - Telescopic-Runner**

The LCAS series combines robust construction with high load capacity. It offers a full-extension stroke that ensures excellent accessibility and serviceability. With options for one-way or two-way extension and a range of sizes, it offers versatile design flexibility.



**Available sizes:** LCAS 28H, LCAS 35, LCAS 43

## 5. EASY-Runner Linear Ball Bearings



### 5.1 Product Description

**IBC EASY-Runners** are high-class and precise linear ball bearings with a very compact design. An inner profile rail is moved within an outer profile rail via cage-guided balls. The inner profile rail thus produces the stroke.

During movement, the balls run on suitably formed ball raceways with zero clearance, just as they would in a rolling bearing, where they make rolling contact with 4 contact points in a precise linear movement. Since only a minimal amount of friction is produced due to the 4 contact points, this technique enables the bearings to achieve very small displacement forces and acceleration forces, while at the same time exhibiting a high degree of stiffness.

The 4 contact points also ensure a noiseless run, even for great loads and high operating speeds. IBC linear ball bearings are compact in their design and therefore require little installation space.

The outer and inner profile rails are manufactured from high-quality quenched and tempered steel (58CrMoV4). Their ball raceways have been treated by an induction surface hardening process, which allows for very high load ratings and extremely long lifetimes.

**IBC EASY-Runners are therefore generally characterised by a high-power density and, as a consequence, they are very efficient.**

### 5.2 Applications

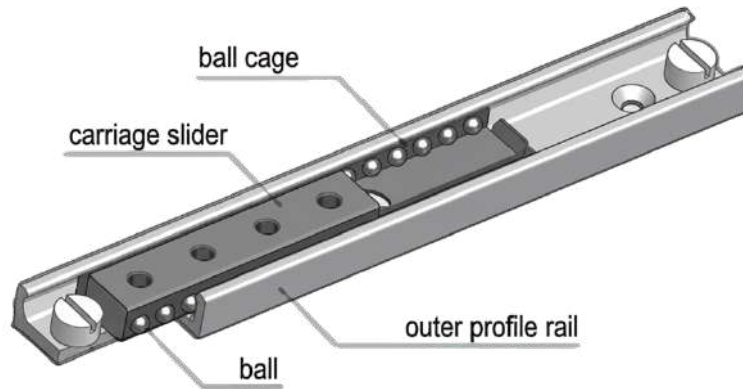
The following list contains typical areas of application:

- Housings of machine tools and production plants
- Transport engineering: door opening systems, battery boxes, etc.
- Handling and automation systems
- Logistics, shelf access equipment, etc.
- Medical technology
- Installed equipment in rescue, fire-fighting and municipal-utility vehicles
- Aerospace
- Printing machines

As the applications within these industries vary greatly, the requirements that the linear ball bearings need to meet are quite diverse. Within the handling and automation industry and in transport engineering the focus is on speed, and therefore on high productivity accompanied by low energy consumption. Within the machine tool sector, the emphasis is on great stiffness and on smooth running characteristics.

### 5.3 Designs

IBC linear ball bearings are available with guide lengths between 130 mm and 1,970 mm that meet individual requirements. All variations are available in sizes 28H, 35 and 43.



The carriage slider is moved exclusively within the outer profile rail. This means that the carriage slider is always shorter than the outer profile rail and is not extendable.

Available configurations:

- Single carriage slider in ball cage (standard)
- Two or more carriage sliders in a shared ball cage
- Two or more carriage sliders in separate ball cages

### 5.4 Technical Properties

#### 5.4.1 Materials

- Outer and inner profile rails: High-quality 58CrMoV4 quenched and tempered steel (1.7792)
- Ball raceways: Inductively surface hardened
- Balls: 100Cr6 bearing steel (1.3505)
- Optional balls: X45Cr13 corrosion resistant steel (1.3541) for food industry applications

#### 5.4.2 Surface Platings

- Standard: Electrogalvanisation
- Optional: Electroless nickel plated
- Optional: ATCoat coating (suitable for food industry, increases lifetime, good dry running properties)

### 5.4.3 Lubrication

For life lubrication with high-quality lubricant for linear guides. Optional special lubrication available depending on the application. Re-lubrication is advisable at certain intervals depending on ambient conditions, operating temperatures, speeds, and operating frequency. Recommended re-lubrication interval: 6 to 12 months of service life.

### 5.4.4 Technical Specifications Summary

Parameter	Value
Temperature Range (Standard)	-30°C to +140°C
Temperature Range (with elastomers)	-30°C to +100°C (max +125°C short term)
Installation Lengths	130 mm to 1,970 mm
Stroke Lengths	34 mm to over 1,474 mm
Maximum Travel Speed	0.8 m/s (depending on application)
Static Load Ratings (Corad)	1,000 N to 67,200 N
Fastener Spacing	80 mm (standard), 25 mm edge distance
Friction Coefficient	≤ 0.01 (when properly mounted)
Clearance Options	Without clearance / With clearance / Preloaded

### 5.5 Product Overview - LCE 28H Series



**Profile dimensions: Width 28 mm, Height 12.3 mm**

Designation	Stroke (mm)	Rail L (mm)	Slider LL (mm)	Corad (N)	Coax (N)	Mx (Nm)	My (Nm)	Mz (Nm)
LCE 28H-0130-0060	34	130	60	3,584	2,509	37	25	18
LCE 28H-0290-0080	174	290	80	4,779	3,345	65	45	23
LCE 28H-0450-0130	284	450	130	7,766	5,436	166	117	38
LCE 28H-0610-0210	364	610	210	12,545	8,782	430	300	62
LCE 28H-0770-0290	444	770	290	17,225	11,910	815	570	83
LCE 28H-0930-0370	524	930	370	21,884	15,248	1,327	930	106
LCE 28H-1170-0450	684	1,170	450	26,683	18,462	1,960	1,374	130

**5.6 Product Overview - LCE 35 Series**



**Profile dimensions: Width 35 mm, Height 16.5 mm**

Designation	Stroke (mm)	Rail L (mm)	Slider LL (mm)	Corad (N)	Coax (N)	Mx (Nm)	My (Nm)	Mz (Nm)
LCE 35-0290-0130	114	290	130	9,984	6,988	219	156	50
LCE 35-0450-0210	194	450	210	16,128	11,290	560	397	87
LCE 35-0610-0290	274	610	290	22,272	15,590	1,086	745	109
LCE 35-0770-0370	354	770	370	28,416	19,891	1,720	1,206	140
LCE 35-0930-0450	434	930	450	34,560	24,192	2,541	1,783	169
LCE 35-1170-0530	594	1,170	530	40,704	28,493	3,521	2,469	198.5
LCE 35-1330-0610	674	1,330	610	46,848	32,794	4,663	3,268	229

**5.7 Product Overview - LCE 43 Series**



### Profile dimensions: Width 43 mm, Height 21.0 mm

Designation	Stroke (mm)	Rail L (mm)	Slider LL (mm)	Corad (N)	Coax (N)	Mx (Nm)	My (Nm)	Mz (Nm)
LCE 43-0290-0130	114	290	130	14,327	10,029	314	215	99.5
LCE 43-0450-0210	194	450	210	23,144	16,201	790	552	157
LCE 43-0610-0290	274	610	290	31,961	22,373	1,504	1,053	217
LCE 43-0770-0370	354	770	370	40,778	28,544	2,448	1,712	275
LCE 43-0930-0450	434	930	450	49,395	34,216	3,614	2,531	334.5
LCE 43-1170-0530	594	1,170	530	57,611	40,688	5,017	3,511	392
LCE 43-1330-0610	674	1,330	610	66,319	46,160	6,644	4,650	452

## 5.8 Mounting Advice

Stiffness, a smooth run and durability are important characteristics of IBC linear ball bearings. The bearings are also compact in their design and easy to assemble. The easy-to-assemble design significantly reduces maintenance and shutdown times and therefore cuts costs.

### Fitting Position

It is advisable to mount linear ball bearings in a horizontal or near-horizontal fitting position. For installations where bearings are mounted in a vertical position, it cannot be completely ruled out that the ball cage will move downward if the stroke is not fully utilised. If operating such an installation, it is advisable to carry out a no-load stroke from time to time to shift the cage back into its correct position.

### End Stops

External end stops are recommended. The internally fitted stops have only been designed to limit the cage.

### Fastening Screws

Countersunk screws according to DIN 7991 are used, appropriate to the relevant overall size. Always use screws of strength class 10.9.

**Typical tightening torques: M5: 8.1 Nm | M6: 14.0 Nm | M8: 34.3 Nm**

### Cage Slip

Under normal operating conditions, the cage moves in synchronisation with the carriage slider, but at half its speed. In unfavourable operating conditions (e.g. fast-changing acceleration or heavily fluctuating strokes), cage slip may occur. In this case, schedule a no-load stroke to re-position the cage. For calculations involving fluctuating strokes, use a friction coefficient of 0.1.

## 5.9 Designation System

### Standard LCE Production Series:

LCE 28H - 0130 - 0060

- LCE = Production series
- 28H / 35 / 43 = Profile size
- 0130 = Rail length in mm (0130 to 1810)
- 0060 = Carriage slider length in mm (0060 to 0610)

### Special Designations:

- AC-LCE... = ATCoat coating
- ...ChNi = Electroless nickel plating

## 5.10 ATCoat Coating Option



*ATCoat coating surface (microscopic view)*

The ATCoat thin dense chromium coating protects the surface from outside environmental conditions and thereby increases the service life of linear guides. The advantages include energy saving and efficient use of material.

The ATCoat coating consists of 98% pure chrome. The chromium coating is extremely hard (between 75 and 78 HRC), free of cracks, firmly adhering, cone-shaped, precise, very thin, and highly pure. Because the process temperature during coating is below 80°C, there is no structural change to the basic material.

The ideal coating thickness is between 2 µm to 4 µm thick, depending on requirements. An ATCoat coating is very often applied to linear guides in the food and chemical industries, where machine parts are exposed to corrosive or aggressive media.

Because the ATCoat coating has received USDA approval and has been approved in accordance with EU Regulation No. 1935/2004, it may be used in the food industry.

## 6. FLEXY-Runner Curve Guidance Systems



### 6.1 Product Description

The **IBC FLEXY-Runner** is a versatile curve guide system designed for smooth, non-linear motion. It supports both constant and variable curves, offering a flexible, cost-effective solution tailored to customer specifications.

With movable roller carriers and precise engineering, it ensures reliable, quiet performance even along complex rail paths. The corresponding carriages are equipped with mobile roller carriers and allow for a smooth run even with complex rail tracks.

**Two profile sizes are available, with designs according to customer specification.**

### 6.2 Applications

Typical applications include:

- Housings for machines
- Door-guidance systems in train doors
- Packaging industry
- Food industry
- Maritime applications
- Automation industry

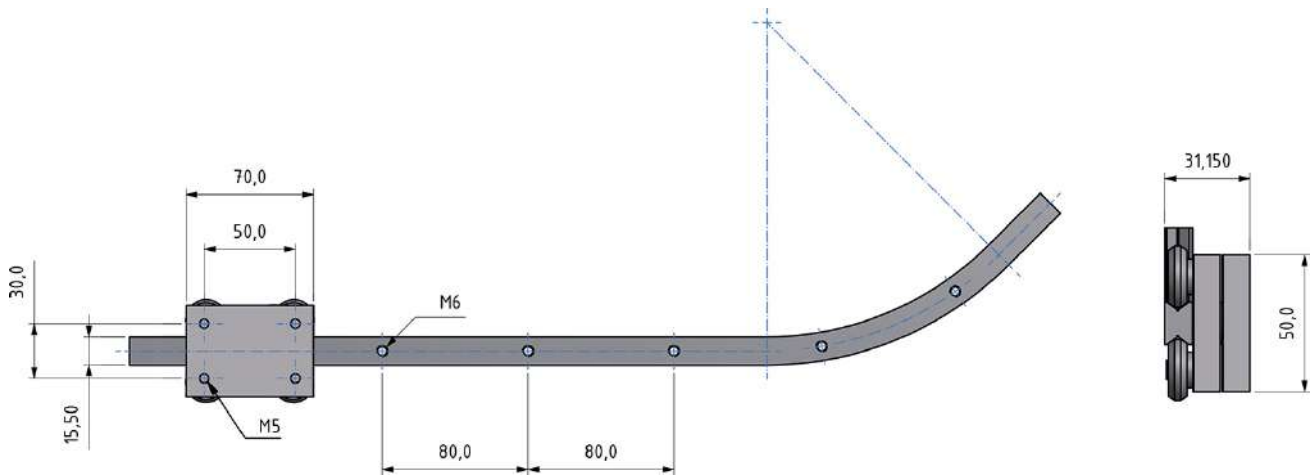
### 6.3 Key Features

- Non-linear movement sequences - run constant radii as well as variable curves
- Mobile roller carriers for smooth operation on complex rail tracks
- Flexible and economical solution
- Custom configurations available to customer specification

- Lifetime lubricated rollers
- Zinc-plated surface coating (other coatings on request)

### 6.4 Technical Specifications

Parameter	Value
Available Profile Sizes	CC 35, CC 43
Profile Dimensions CC 35	15,5 × 10,10 mm
Profile Dimensions CC 43	23,1 × 13,50 mm
Minimum Radius	120 mm
Radius Tolerance	± 1°
Temperature Range	-30°C to +100°C
Surface Coating	Zinc-plated by galvanisation



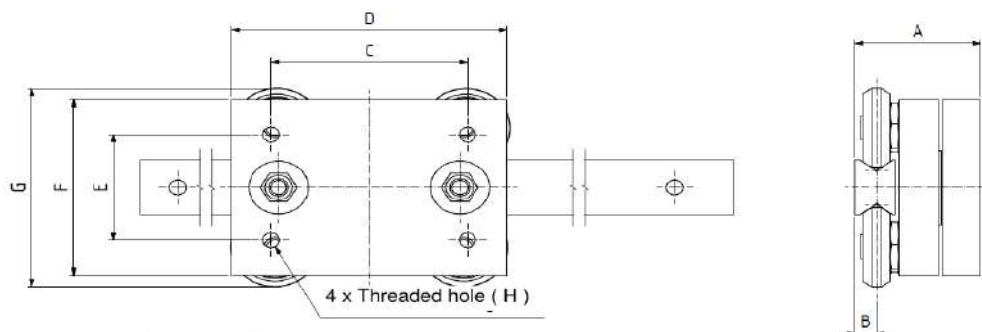
## 6.5 Materials

Component	Material
Guide Rails	58CrMoV4 (or similar)
Carrier Body	High-strength aluminium
Rollers	100Cr6 steel, lifetime lubricated

## 6.6 Load Ratings

Size	Co rad (N)	Co ax (N)	Fasteners
CC 35	560	390	M5
CC 43	1,600	1,110	M8

## 6.7 Carriage Dimensions



### Carriage Dimension Table

Size	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)	Thread H
CC 35	32.30	3.50	50.0	70.0	30.0	50.0	56.0	M5
CC 43	36.40	7.50	80.0	98.0	55.0	80.0	89.0	M8

All measurements in mm. Carriage features 4× threaded holes (H) for mounting.

## 6.8 Custom Solutions

With our extensive product range, as well as worldwide on-site support for our customers, our service and technical departments can identify specific and economic solutions for your bearing applications. We support you at an early stage in your application development and look forward to a detailed discussion with you.

Rail configurations are custom-manufactured to your specific radius and curve requirements. Contact DC Auto-Motion for application engineering support.



## Contact Us

### DC Auto-Motion

*Motion Control Solutions*

**Phone:** +27 (0) 11 453 1740

**Website:** [www.dcauto-motion.co.za](http://www.dcauto-motion.co.za)

### Technical Support

Our engineering team is available to assist with product selection, application engineering, and custom solutions for your specific requirements.

### Quality Assurance

IBC products are manufactured under a quality management system certified to DIN EN ISO 9001.

Food industry products comply with FDA/USDA and EU Regulation 1935/2004.

---

*Specifications are subject to change without notice.  
Please contact us for current product availability and pricing.*

Document Reference: TI-L-8000.1/E

© DC Auto-Motion. All rights reserved.