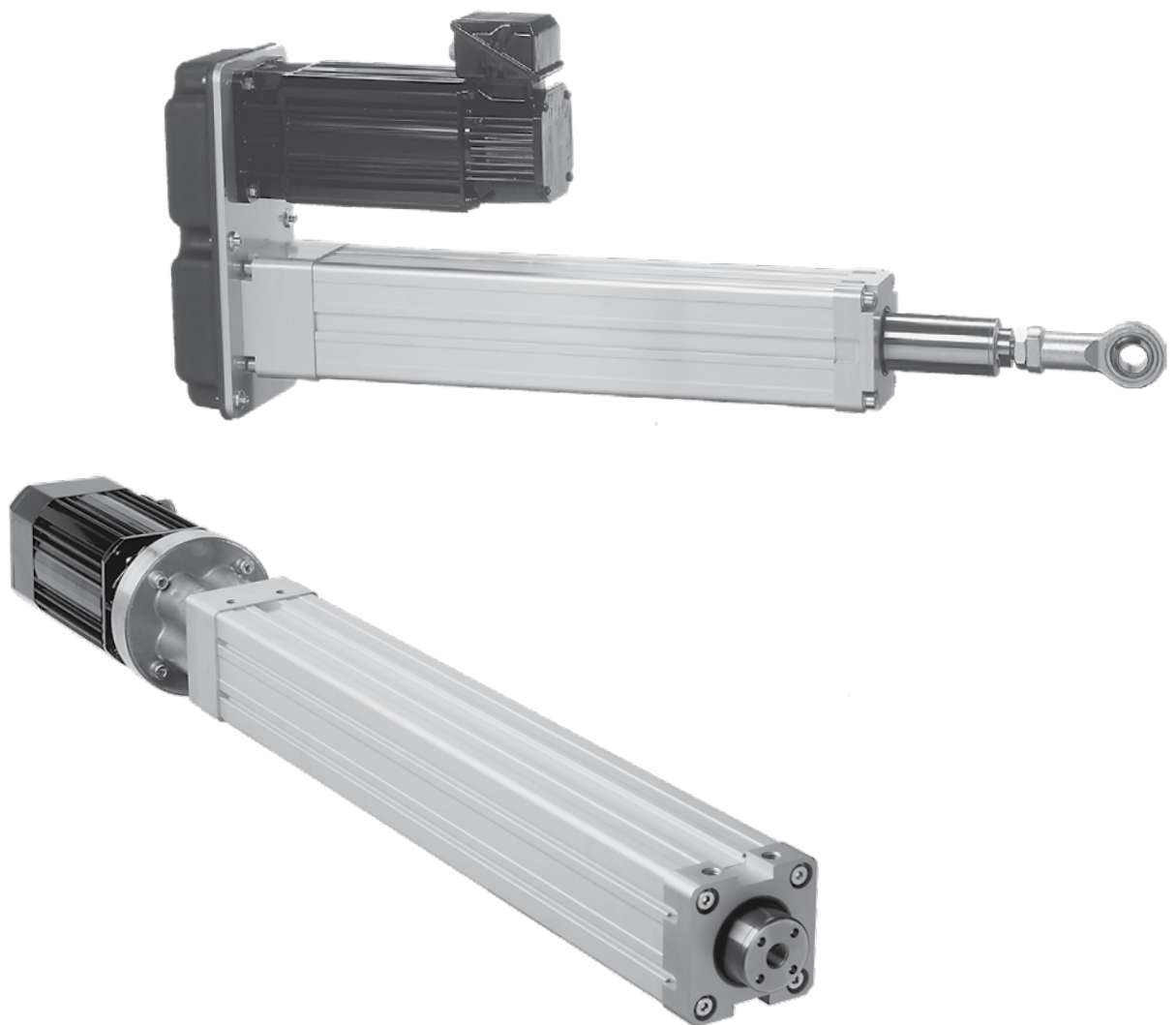




## ECT Series

### Introduction

The ECT Series is our line of packaged precision linear actuators. They are based on the proven T Series and equipped with a high-quality selection of motors and gears that make them ready to take on the most demanding applications. The ECT Series is ideal when short design times, maximum performance and the longest lifecycle are required. And if you can't find a standard unit that fits, our engineers can build you a customized unit to suit your needs.



## ECT Series

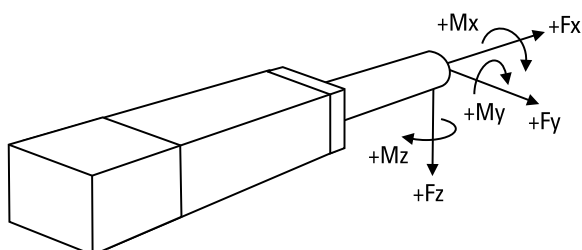
### Overview

#### Features

- Extruded, anodized aluminum cover tube
- Anodized aluminum housing
- Hard-chromed steel extension tube
- Can be installed in all directions
- Ball screw drive
- Slide guides
- Load up to 38000 N
- Asynchronous, three-phase AC motor or brushless AC servo motor
- Parallel or inline motor
- Belt gear, planetary gear or direct drive
- IP65 as standard
- Large range of options and accessories
- Wash-down-protected versions
- Mounting accessories according to hydraulic cylinder standards available

Parameter		ECT90	ECT130
Profile size (width × height)	[mm]	90 × 92	130 × 130
Stroke length (S), maximum	[mm]	1500	2000
Speed, maximum	[mm/s]	1600	2000
Dynamic load (Fx), maximum	[N]	20 000	38 000
Page		22 - 35	36 - 49

### Definition of Forces



## ECT90

### Parallel IEC90 AC Motor



#### Standard Features and Benefits

- Robust and reliable
- Three-phase, asynchronous AC motor with brake
- Belt gear
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 1500 mm
- Load up to 9750 N
- Speed up to 1520 mm/s

#### General Specifications

Parameter	ECT90
Profile size (w × h)	90 × 92 mm
Screw type	ball screw
Gear box	belt gear
Motor type	asynchronous AC motor
Motor voltage	3 × 400 Vac
Motor power	2,2 kW
Motor current, nominal	4,7 A
Motor feedback	no
Motor connection	terminal box
Motor brake	yes (230 Vac)
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT90
Stroke length (S), maximum [mm]	1500
Maximum dynamic load (Fx) <sup>1</sup> [N]	
ECT09-I09B03PB-2510	9750
ECT09-I09B02PB-2510	6500
ECT09-I09B03PB-3220	4800
ECT09-I09B02PB-3220	3100
ECT09-I09B01PB-3220	1600
ECT09-I09B01PB-3232	900
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed <sup>3</sup> [mm/s]	
ECT09-I09B03PB-2510	160
ECT09-I09B02PB-2510	240
ECT09-I09B03PB-3220	320
ECT09-I09B02PB-3220	480
ECT09-I09B01PB-3220	960
ECT09-I09B01PB-3232	1520
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	25, 32
Screw leads <sup>4</sup> [mm]	10, 20, 32
Backlash [mm]	
Screw diameter = 25 mm	0,11
Screw diameter = 32 mm	0,18
Repeatability [± mm]	0,05
Protection class, standard	IP65

<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

<sup>3</sup>The maximum speed is based on a max. input frequency to the motor of 50 Hz. Frequency inverters can provide higher frequencies thus higher speeds but that may damage the actuator.

<sup>4</sup>10 mm lead = diameter 25 mm. 20 and 32 mm leads = diameter 32 mm.

» Ordering Key - see page 76

» Mounting Options - see page 50

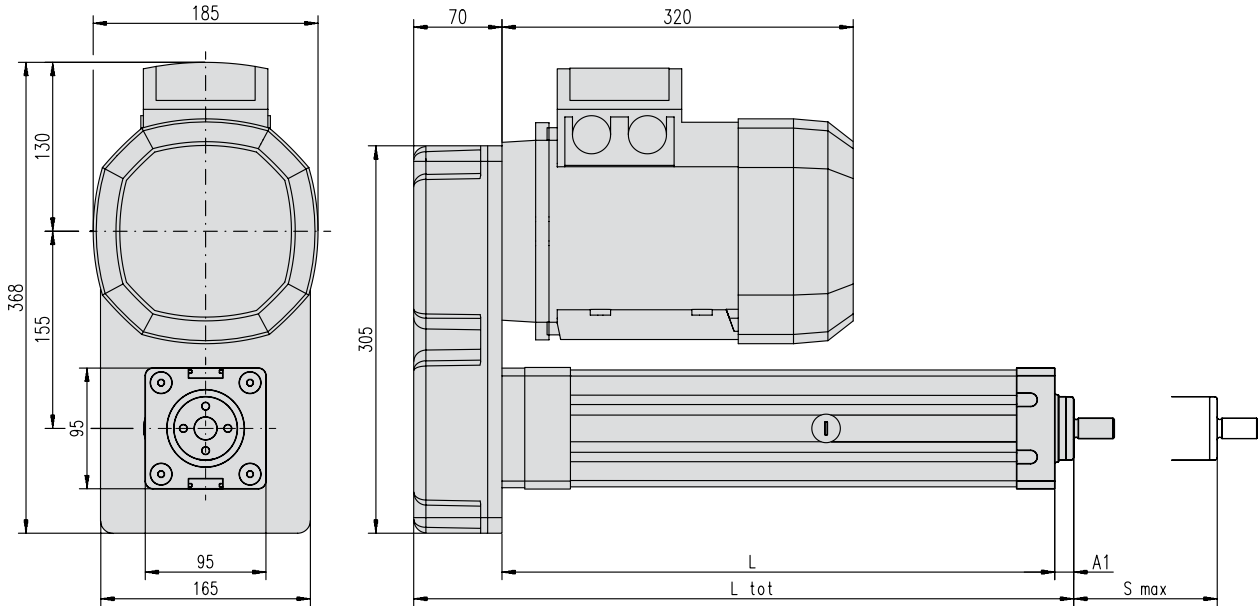
» Adapter Options - see page 54

» Glossary - see page 80

# ECT90

## Parallel IEC90 AC Motor

<b>Dimensions</b>	<b>Projection</b>
METRIC	



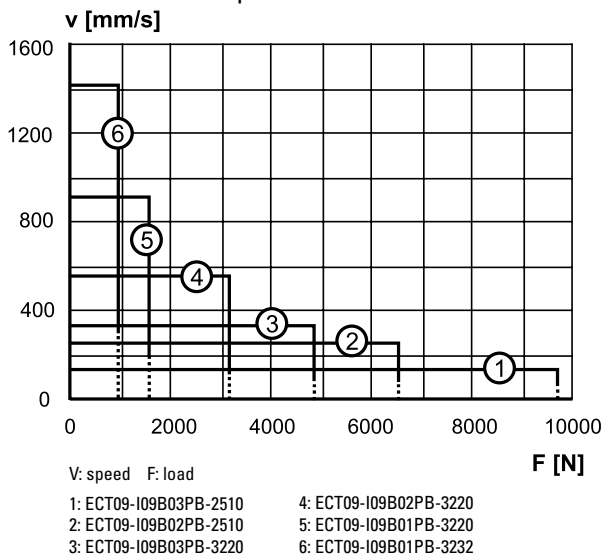
S max: maximum stroke (ordering stroke in mm)  
L: cover tube length

L tot: retracted length  
A1: ECT09-I09B • • PB-25 = 15 mm, ECT09-I09B • • PB-32 = 12 mm

<b>Cover tube length (L)</b>	<b>[mm]</b>	ECT09-I09BxxPB-25: $L = S_{max} + 195$ ECT09-I09BxxPB-32: $L = S_{max} + 230$
<b>Retracted length (L tot)</b>	<b>[mm]</b>	ECT09-I09BxxPB-25: $L_{tot} = S_{max} + 280$ ECT09-I09BxxPB-32: $L_{tot} = S_{max} + 312$
<b>Weight of unit</b>	<b>[kg]</b>	ECT09-I09BxxPB-25: $kg = 30,8 + 0,016 \times S_{max}$ ECT09-I09BxxPB-32: $kg = 33,2 + 0,018 \times S_{max}$

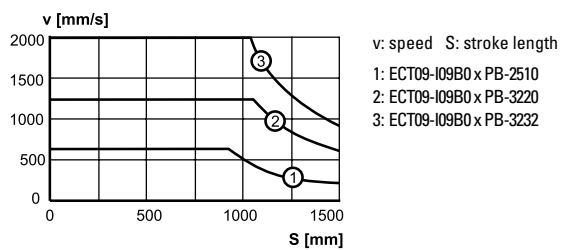
## Performance Diagrams

Speed vs. Load

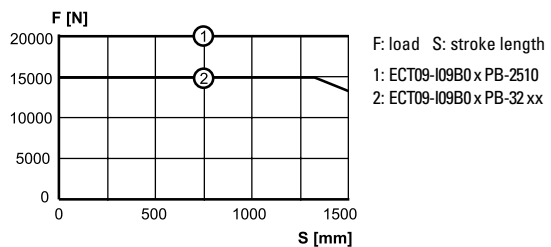


..... = Overheating of the motor may occur if running at this speed continuously!

Critical Speed vs. Stroke

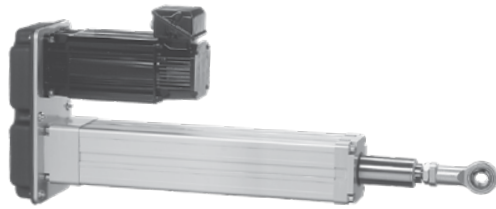


Column Load Limit vs. Stroke



## ECT90

### Parallel B43 AC Servo Motor



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Belt gear
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 1500 mm
- Load up to 5800 N
- Speed up to 420 mm/s

#### General Specifications

Parameter	ECT90
Profile size (w × h)	90 × 92 mm
Screw type	ball screw
Gear box	belt gear
Motor type	brushless AC servo motor
Motor designation	AKM43E-ANCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT90
Stroke length (S), maximum [mm]	1500
Maximum dynamic load (Fx) <sup>1</sup> [N]	5800 ECT09-B43R03PB-2510 ECT09-B43R02PB-2510 ECT09-B43R03PB-3220 ECT09-B43R02PB-3220
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	140 ECT09-B43R03PB-2510 210 ECT09-B43R02PB-2510 270 ECT09-B43R03PB-3220 420 ECT09-B43R02PB-3220
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	25, 32
Screw leads <sup>3</sup> [mm]	10, 20
Backlash [mm]	0,11 Screw diameter = 25 mm 0,18 Screw diameter = 32 mm
Repeatability [± mm]	0,05
Protection class, standard	IP65

<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

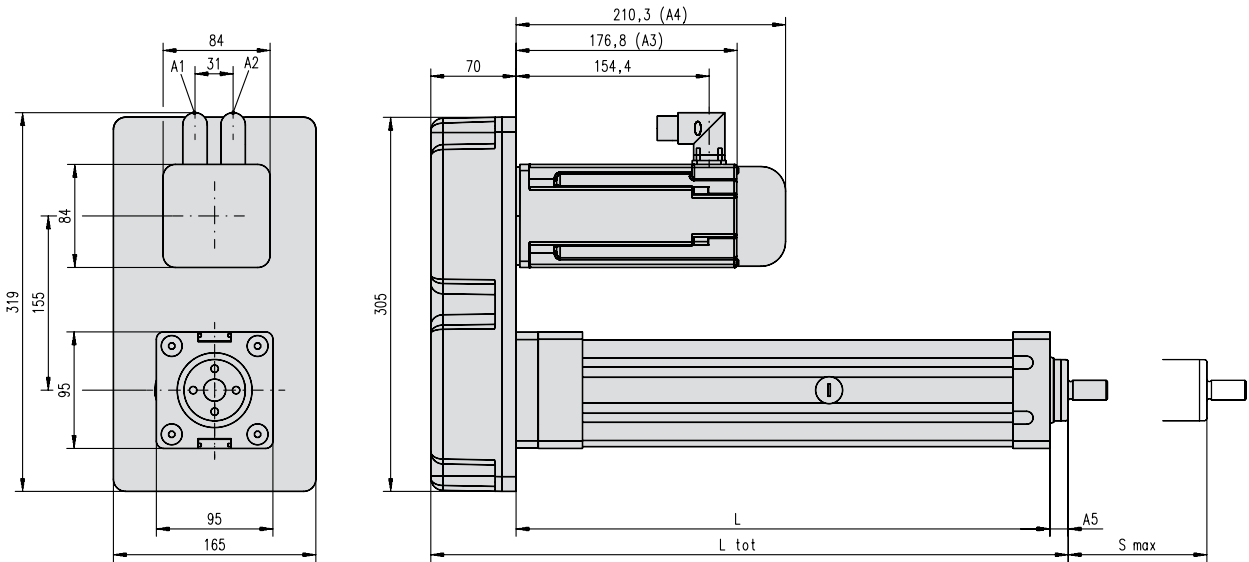
<sup>3</sup>10 mm lead = diameter 25 mm. 20 mm lead = diameter 32 mm.

- » Ordering Key - see page 76
- » Mounting Options - see page 50
- » Adapter Options - see page 54
- » Glossary - see page 80

# ECT90

## Parallel B43 AC Servo Motor

Dimensions	Projection
METRIC	



S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

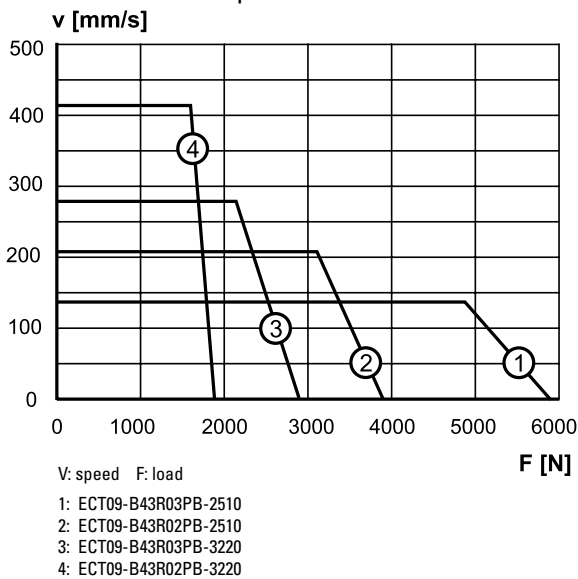
A1: power connector  
A2: resolver connector  
A3: without brake

A4: with brake  
A5: ECT09-B43•••PB-25 = 15 mm, ECT09-B43•••PB-32 = 12 mm

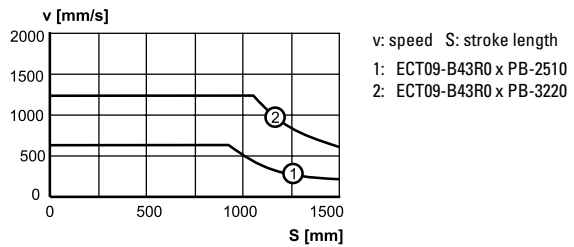
<b>Cover tube length (L)</b>	[mm]	ECT09-B43 xxx PB-25: L = S max + 195 ECT09-B43 xxx PB-32: L = S max + 230
<b>Retracted length (L tot)</b>	[mm]	ECT09-B43 xxx PB-25: L tot = S max + 280 ECT09-B43 xxx PB-32: L tot = S max + 312
<b>Weight of unit</b>	[kg]	ECT09-B43 xx PB-25: kg = 17,2 + 0,016 × S max ECT09-B43 xx PB-32: kg = 19,6 + 0,018 × S max

### Performance Diagrams

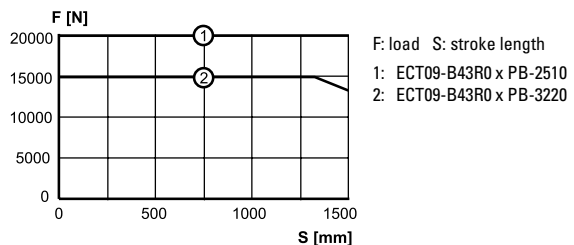
Speed vs. Load



Critical Speed vs. Stroke



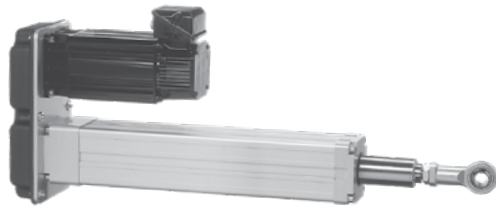
Column Load Limit vs. Stroke





## ECT90

### Parallel B53 AC Servo Motor



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Belt gear
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 1500 mm
- Load up to 9800 N
- Speed up to 670 mm/s

#### General Specifications

Parameter	ECT90
Profile size (w × h)	90 × 92 mm
Screw type	ball screw
Gear box	belt gear
Motor type	brushless AC servo motor
Motor designation	AKM53K-CNCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT90
Stroke length (S), maximum [mm]	1500
Maximum dynamic load (Fx) <sup>1</sup> [N]	
ECT09-B53R03PB-2510	9800
ECT09-B53R02PB-2510	8000
ECT09-B53R03PB-3220	5900
ECT09-B53R02PB-3220	3900
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	
ECT09-B53R03PB-2510	220
ECT09-B53R02PB-2510	330
ECT09-B53R03PB-3220	440
ECT09-B53R02PB-3220	670
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	25, 32
Screw leads <sup>3</sup> [mm]	10, 20
Backlash [mm]	
Screw diameter = 25 mm	0,11
Screw diameter = 32 mm	0,18
Repeatability [± mm]	0,05
Protection class, standard	IP65

<sup>1</sup> At a 100% duty cycle.

<sup>2</sup> Value at full retraction - decreases as the actuator extends.

<sup>3</sup> 10 mm lead = diameter 25 mm. 20 mm lead = diameter 32 mm.

» Ordering Key - see page 76

» Mounting Options - see page 50

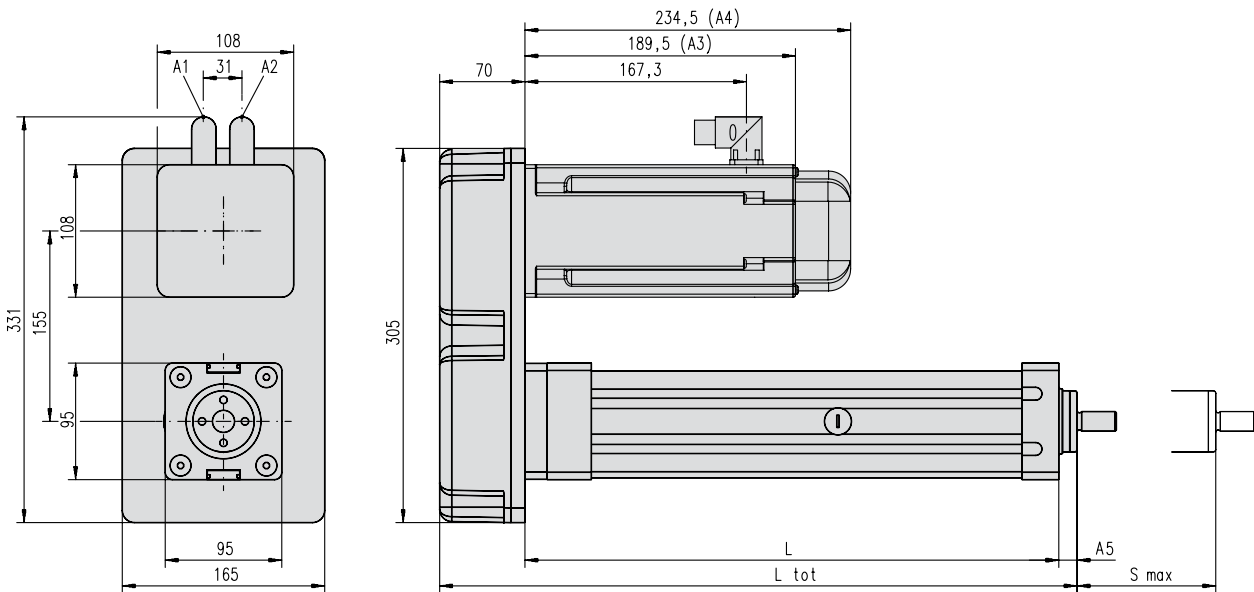
» Adapter Options - see page 54

» Glossary - see page 80

# ECT90

## Parallel B53 AC Servo Motor

Dimensions	Projection
METRIC	



S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

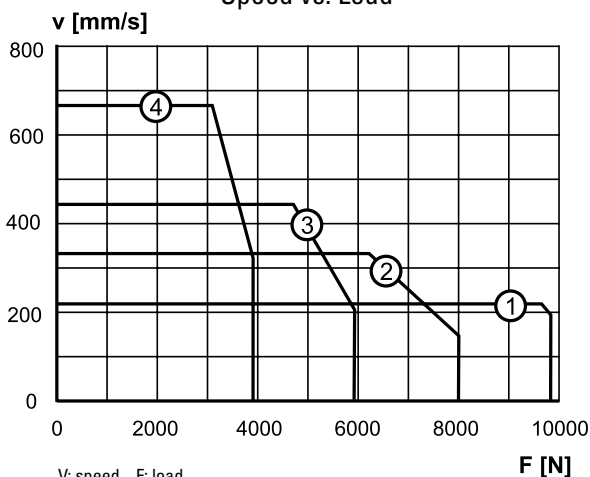
A1: power connector  
A2: resolver connector  
A3: without brake

A4: with brake  
A5: ECT09-B53...PB-25 = 15 mm, ECT09-B53...PB-32 = 12 mm

<b>Cover tube length (L)</b>	[mm]	ECT09-B53 xxx PB-25: L = S max + 195 ECT09-B53 xxx PB-32: L = S max + 230
<b>Retracted length (L tot)</b>	[mm]	ECT09-B53 xxx PB-25: L tot = S max + 280 ECT09-B53 xxx PB-32: L tot = S max + 312
<b>Weight of unit</b>	[kg]	ECT09-B53 xx PB-25: kg = 20,2 + 0,016 × S max ECT09-B53 xx PB-32: kg = 22,6 + 0,018 × S max

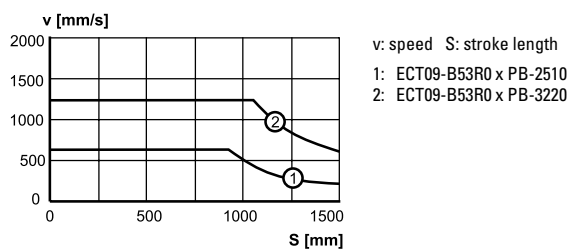
## Performance Diagrams

Speed vs. Load



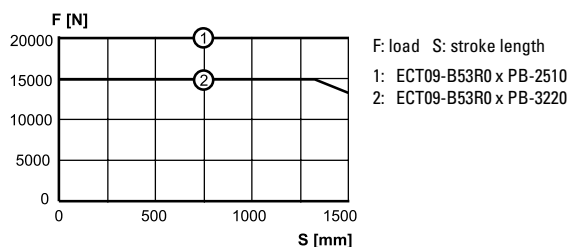
V: speed F: load  
1: ECT09-B53R03PB-2510  
2: ECT09-B53R02PB-2510  
3: ECT09-B53R03PB-3220  
4: ECT09-B53R02PB-3220

Critical Speed vs. Stroke



v: speed S: stroke length  
1: ECT09-B53R0 x PB-2510  
2: ECT09-B53R0 x PB-3220

Column Load Limit vs. Stroke



F: load S: stroke length  
1: ECT09-B53R0 x PB-2510  
2: ECT09-B53R0 x PB-3220



## ECT90

### Direct Drive, Inline B43 AC Servo Motor

- » Ordering Key - see page 77
- » Mounting Options - see page 50
- » Adapter Options - see page 54
- » Glossary - see page 80



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Direct drive
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 1500 mm
- Load up to 5300 N
- Speed up to 1600 mm/s

#### General Specifications

Parameter	ECT90
Profile size (w × h)	90 × 92 mm
Screw type	ball screw
Gear box	no, direct drive
Motor type	brushless AC servo motor
Motor designation	AKM43E-ANCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT90
Stroke length (S), maximum [mm]	1500
Maximum dynamic load (Fx) <sup>1</sup> [N]	2000 900
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	410 820
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	25, 32
Screw leads <sup>3</sup> [mm]	10, 20
Backlash [mm]	0,11 0,18
Repeatability [± mm]	0,05
Protection class, standard	IP65

<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

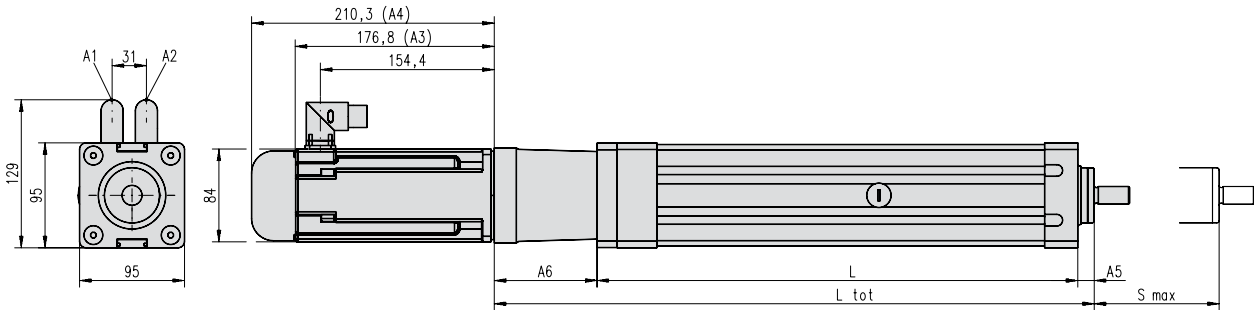
<sup>3</sup>10 mm lead = diameter 25 mm. 20 mm lead = diameter 32 mm.

Precision Linear Actuators

# ECT90

## Direct Drive, Inline B43 AC Servo Motor

<b>Dimensions</b>	<b>Projection</b>
METRIC	



S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

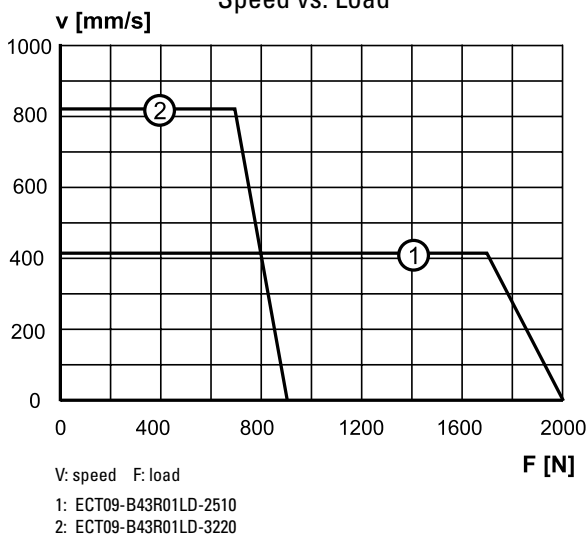
A1: power connector  
A2: resolver connector  
A3: without brake

A4: with brake  
A5: ECT09-B43 • 01LD-25 = 15 mm, ECT09-B43 • 01LD-32 = 12 mm  
A6: ECT09-B43 • 01LD-25 = 93 mm, ECT09-B43 • 01LD-32 = 103 mm

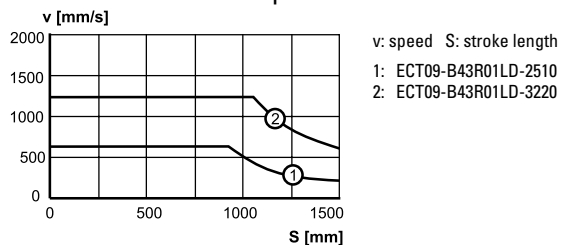
<b>Cover tube length (L)</b>	<b>[mm]</b>	ECT09-B43 x-B43 • 01LD-32: L = S max + 230
<b>Retracted length (L tot)</b>	<b>[mm]</b>	ECT09-B43 x 01LD-25: L tot = S max + 303 ECT09-B43 x 01LD-32: L tot = S max + 345
<b>Weight of unit</b>	<b>[kg]</b>	ECT09-B43 xx 01LD-25: kg = 13,7 + 0,016 × S max ECT09-B43 xx 01LD-32: kg = 16,2 + 0,018 × S max

### Performance Diagrams

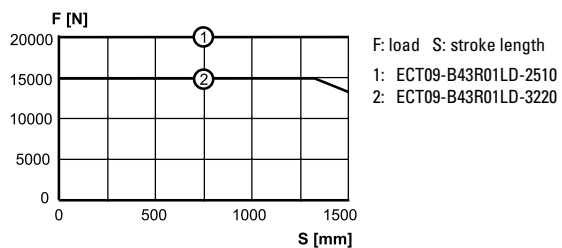
Speed vs. Load



Critical Speed vs. Stroke



Column Load Limit vs. Stroke



## ECT90

### Direct Drive, Inline B53 AC Servo Motor

- » Ordering Key - see page 77
- » Mounting Options - see page 50
- » Adapter Options - see page 54
- » Glossary - see page 80



### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Direct drive
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 1500 mm
- Load up to 5300 N
- Speed up to 1600 mm/s

### General Specifications

Parameter	ECT90
Profile size (w × h)	90 × 92 mm
Screw type	ball screw
Gear box	no, direct drive
Motor type	brushless AC servo motor
Motor designation	AKM53K-ANCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

### Performance Specifications

Parameter	ECT90
Stroke length (S), maximum [mm]	1500
Maximum dynamic load (Fx) <sup>1</sup> [N]	
ECT09-B53R01LD-2510	5300
ECT09-B53R01LD-3220	2600
ECT09-B53R01LD-3232	1500
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	
ECT09-B53R01LD-2510	450
ECT09-B53R01LD-3220	1000
ECT09-B53R01LD-3232	1600
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	25, 32
Screw leads <sup>3</sup> [mm]	10, 20, 32
Backlash [mm]	
Screw diameter = 25 mm	0,11
Screw diameter = 32 mm	0,18
Repeatability [± mm]	0,05
Protection class, standard	IP65

<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

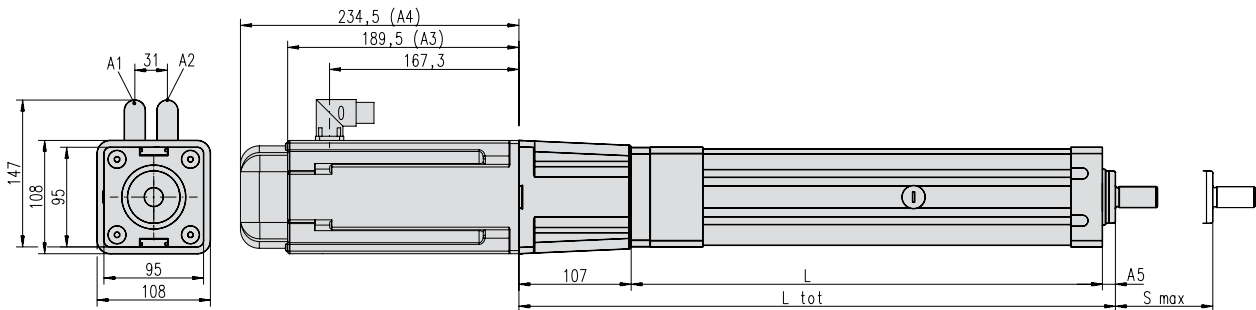
<sup>3</sup>10 mm lead = diameter 25 mm. 20 and 32 mm leads = diameter 32 mm.

Precision Linear Actuators

# ECT90

## Direct Drive, Inline B53 AC Servo Motor

Dimensions	Projection
METRIC	



S max: maximum stroke (ordering stroke in mm)  
 L: cover tube length  
 L tot: retracted length

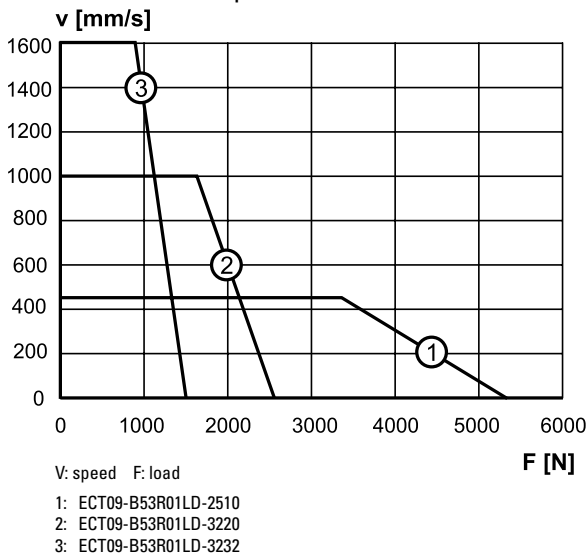
A1: power connector  
 A2: resolver connector  
 A3: without brake

A4: with brake  
 A5: ECT09-B53 • 01LD-25 = 15 mm, ECT09-B53 • 01LD-32 = 12 mm

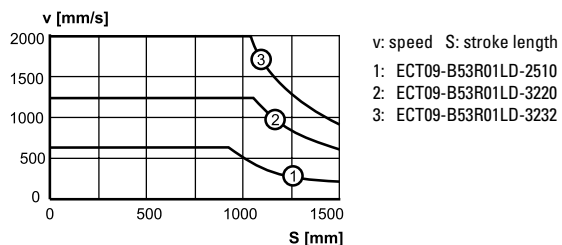
<b>Cover tube length (L)</b>	[mm]	ECT09-B53 x 01LD-25: L = S max + 195 ECT09-B53 x 01LD-32: L = S max + 230
<b>Retracted length (L tot)</b>	[mm]	ECT09-B53 x 01LD-25: L tot = S max + 303 ECT09-B53 x 01LD-32: L tot = S max + 344
<b>Weight of unit</b>	[kg]	ECT09-B53 xx 01LD-25: kg = 17,2 + 0,016 × S max ECT09-B53 xx 01LD-32: kg = 19,6 + 0,018 × S max

### Performance Diagrams

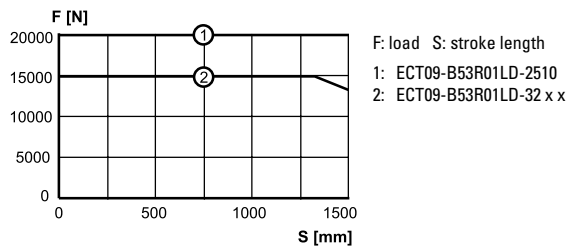
Speed vs. Load



Critical Speed vs. Stroke



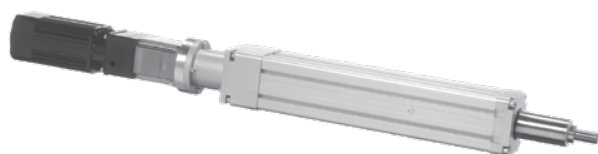
Column Load Limit vs. Stroke



## ECT90

### Planetary Gear, Inline B43 AC Servo Motor

- » Ordering Key - see page 77
- » Mounting Options - see page 50
- » Adapter Options - see page 54
- » Glossary - see page 80



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Planetary gear
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 1500 mm
- Load up to 10000 N
- Speed up to 160 mm/s

#### General Specifications

Parameter	ECT90
Profile size (w × h)	90 × 92 mm
Screw type	ball screw
Gear box	planetary gear
Motor type	brushless AC servo motor
Motor designation	AKM43E-ANCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT90
Stroke length (S), maximum [mm]	1500
Maximum dynamic load (Fx) <sup>1</sup> [N]	10000 5000
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	80 160
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	32
Screw leads [mm]	20
Backlash [mm]	0,11 0,18
Repeatability [± mm]	0,05
Protection class, standard	IP65

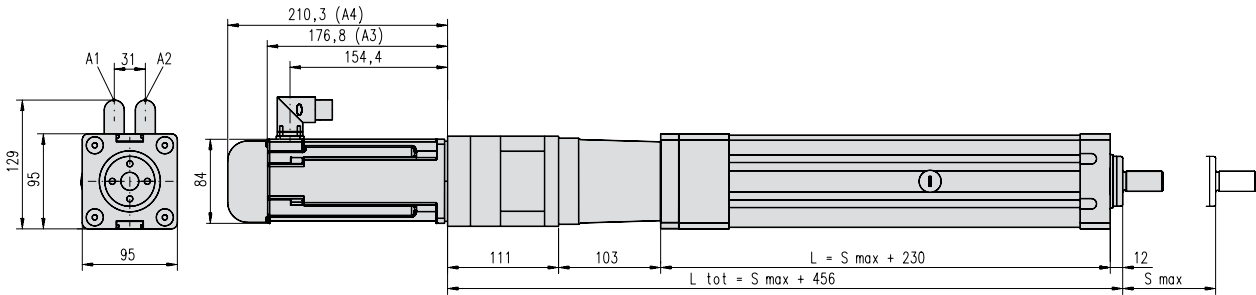
<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

# ECT90

## Planetary Gear, Inline B43 AC Servo Motor

Dimensions	Projection
METRIC	



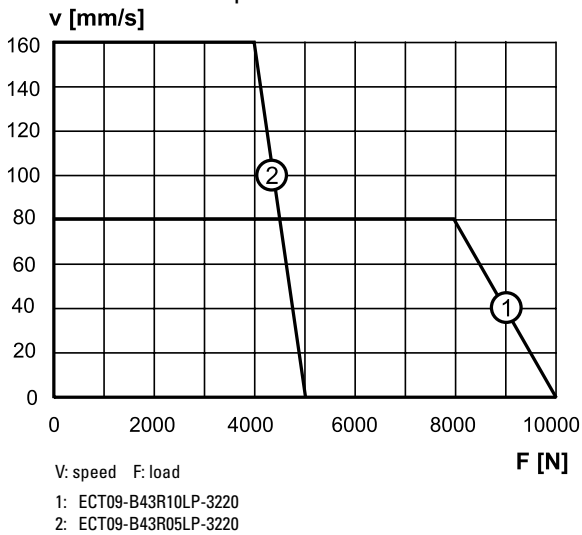
S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

A1: power connector  
A2: resolver connector  
A3: without brake  
A4: with brake

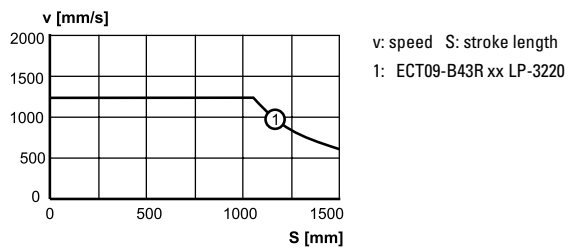
<b>Cover tube length (L)</b>	[mm]	$L = S_{max} + 230$
<b>Retracted length (L tot)</b>	[mm]	$L_{tot} = S_{max} + 456$
<b>Weight of unit</b>	[kg]	$kg = 19,2 + 0,018 \times S_{max}$

### Performance Diagrams

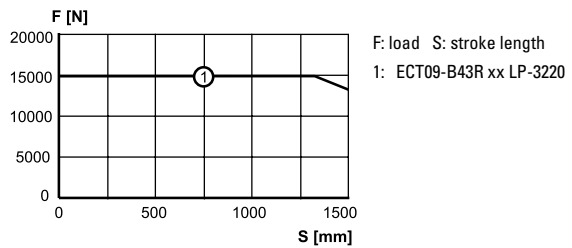
Speed vs. Load



Critical Speed vs. Stroke



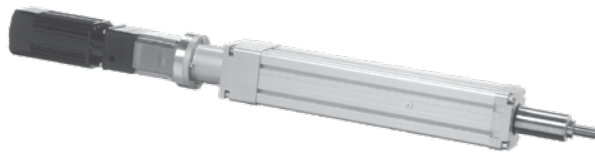
Column Load Limit vs. Stroke



## ECT90

### Planetary Gear, Inline B53 AC Servo Motor

- » Ordering Key - see page 77
- » Mounting Options - see page 50
- » Adapter Options - see page 54
- » Glossary - see page 80



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Planetary gear
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 1500 mm
- Load up to 20000 N
- Speed up to 270 mm/s

#### General Specifications

Parameter	ECT90
Profile size (w × h)	90 × 92 mm
Screw type	ball screw
Gear box	planetary gear
Motor type	brushless AC servo motor
Motor designation	AKM53K-ANCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT90
Stroke length (S), maximum [mm]	1500
Maximum dynamic load (Fx) <sup>1</sup> [N]	20000 ECT09-B53R10LP-3220 13000 ECT09-B53R05LP-3220
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	130 ECT09-B53R10LP-3220 270 ECT09-B53R05LP-3220
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	32
Screw leads [mm]	20
Backlash [mm]	0,11 Screw diameter = 25 mm 0,18 Screw diameter = 32 mm
Repeatability [± mm]	0,05
Protection class, standard	IP65

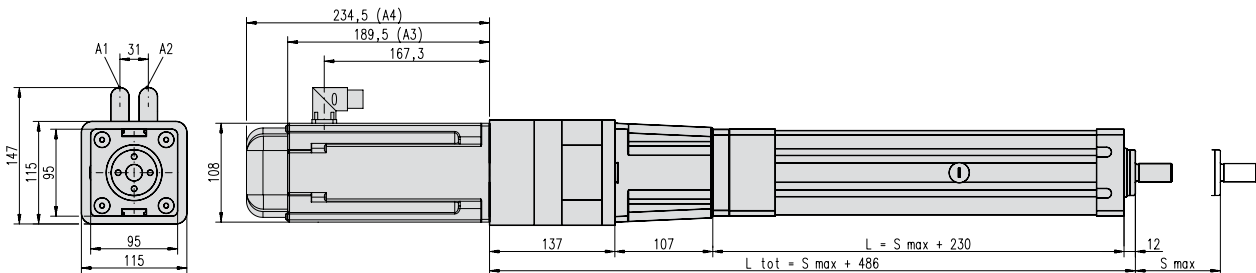
<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

# ECT90

## Planetary Gear, Inline B53 AC Servo Motor

Dimensions	Projection
METRIC	



S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

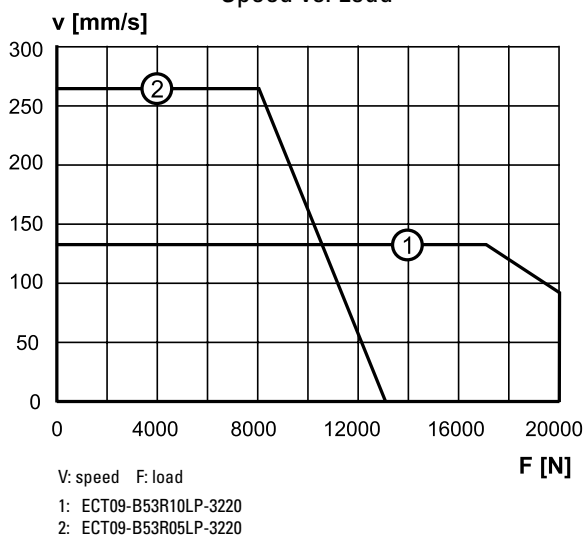
A1: power connector  
A2: resolver connector  
A3: without brake

A4: with brake

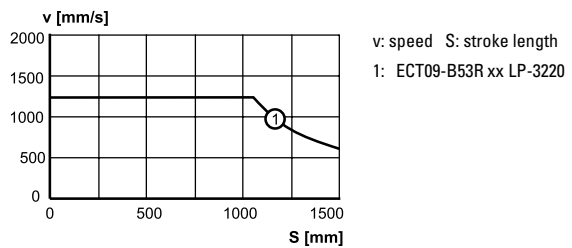
<b>Cover tube length (L)</b>	<b>[mm]</b>	$L = S \text{ max} + 230$
<b>Retracted length (L tot)</b>	<b>[mm]</b>	$L \text{ tot} = S \text{ max} + 486$
<b>Weight of unit</b>	<b>[kg]</b>	$\text{kg} = 24,8 + 0,018 \times S \text{ max}$

### Performance Diagrams

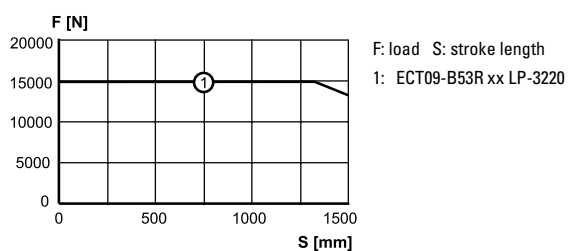
Speed vs. Load



Critical Speed vs. Stroke



Column Load Limit vs. Stroke





## ECT130

### Parallel IEC100 AC Motor



#### Standard Features and Benefits

- Robust and reliable
- Three-phase, asynchronous AC motor with brake
- Belt gear
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 2000 mm
- Load up to 13300 N
- Speed up to 1900 mm/s

#### General Specifications

Parameter	ECT130
Profile size (w × h)	130 × 130 mm
Screw type	ball screw
Gear box	belt gear
Motor type	asynchronous AC motor
Motor voltage	3 × 400 Vac
Motor power	3,0 kW
Motor current, nominal	6,1 A
Motor feedback	no
Motor connection	terminal box
Motor brake	yes (230 Vac)
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT130
Stroke length (S), maximum [mm]	2000
Maximum dynamic load (Fx) <sup>1</sup> [N]	ECT13-110B03PB-4010 13300 ECT13-110B02PB-4010 9400 ECT13-110B03PB-4020 6200 ECT13-110B02PB-4020 4200 ECT13-110B01PB-4020 1800 ECT13-110B01PB-4040 600
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed <sup>3</sup> [mm/s]	ECT13-110B03PB-4010 175 ECT13-110B02PB-4010 210 ECT13-110B03PB-4020 300 ECT13-110B02PB-4020 420 ECT13-110B01PB-4020 950 ECT13-110B01PB-4040 1900
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	40
Screw leads [mm]	10, 20, 40
Backlash [mm]	0,21
Repeatability [± mm]	0,05
Protection class, standard	IP65

<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

<sup>3</sup>The maximum speed is based on a max. input frequency to the motor of 50 Hz. Frequency inverters can provide higher frequencies thus higher speeds but that may damage the actuator.

» Ordering Key - see page 78

» Mounting Options - see page 50

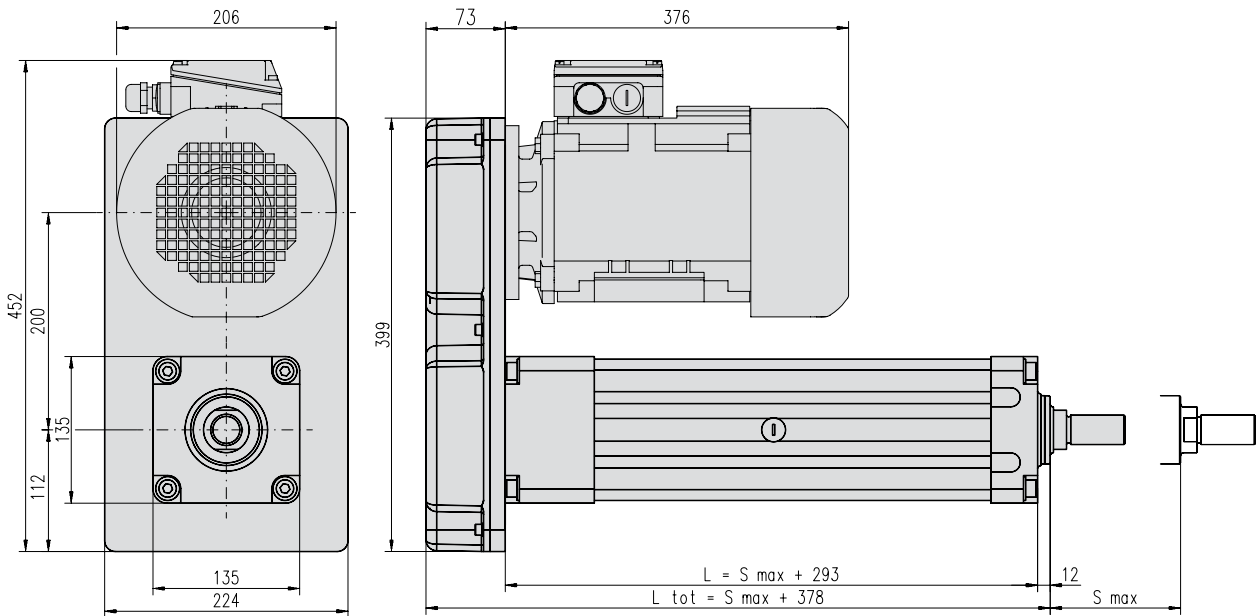
» Adapter Options - see page 54

» Glossary - see page 80

# ECT130

## Parallel IEC100 AC Motor

Dimensions	Projection
METRIC	

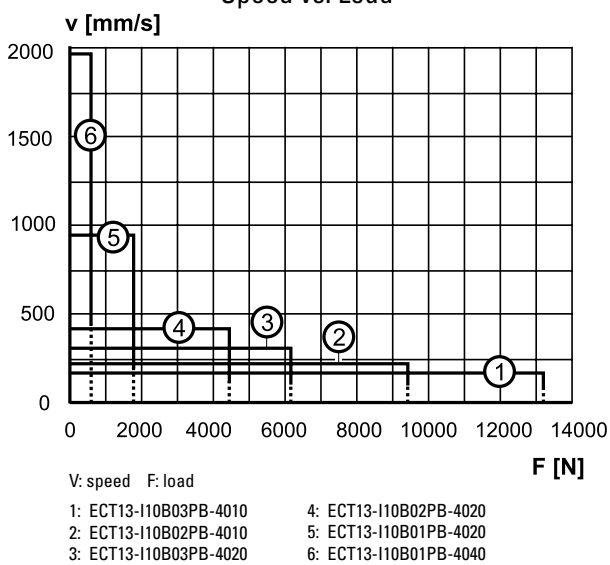


S max: maximum stroke (ordering stroke in mm)  
 L: cover tube length  
 L tot: retracted length

Cover tube length (L)	[mm]	$L = S \text{ max} + 293$
Retracted length (L tot)	[mm]	$L \text{ tot} = S \text{ max} + 378$
Weight of unit	[kg]	$\text{kg} = 63,5 + 0,03 \times S \text{ max}$

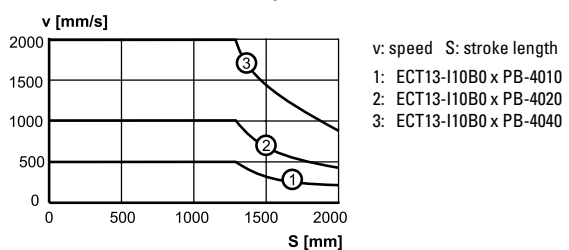
### Performance Diagrams

Speed vs. Load

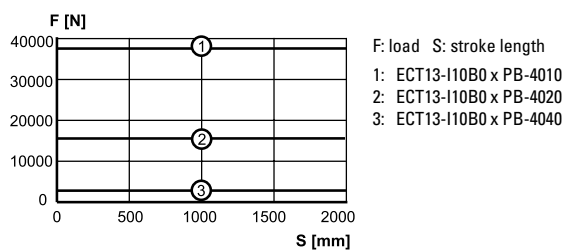


..... = Overheating of the motor may occur if running at this speed continuously!

Critical Speed vs. Stroke



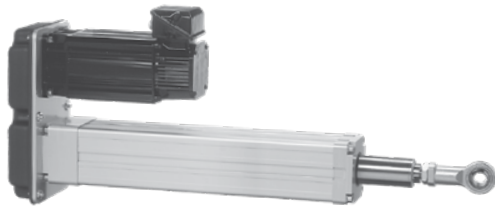
Column Load Limit vs. Stroke





## ECT130

### Parallel B53 AC Servo Motor



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Belt gear
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 2000 mm
- Load up to 15000 N
- Speed up to 440 mm/s

#### General Specifications

Parameter	ECT130
Profile size (w × h)	130 × 130 mm
Screw type	ball screw
Gear box	belt gear
Motor type	brushless AC servo motor
Motor designation	AKM53K-CNCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT130
Stroke length (S), maximum [mm]	2000
Maximum dynamic load (Fx) <sup>1</sup> [N]	ECT13-B53R03PB-4010 15000 ECT13-B53R02PB-4010 10500 ECT13-B53R03PB-4020 7000 ECT13-B53R02PB-4020 5000
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	ECT13-B53R03PB-4010 160 ECT13-B53R02PB-4010 220 ECT13-B53R03PB-4020 320 ECT13-B53R02PB-4020 440
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	40
Screw leads [mm]	10, 20
Backlash [mm]	0,21
Repeatability [± mm]	0,05
Protection class, standard	IP65

<sup>1</sup> At a 100% duty cycle.

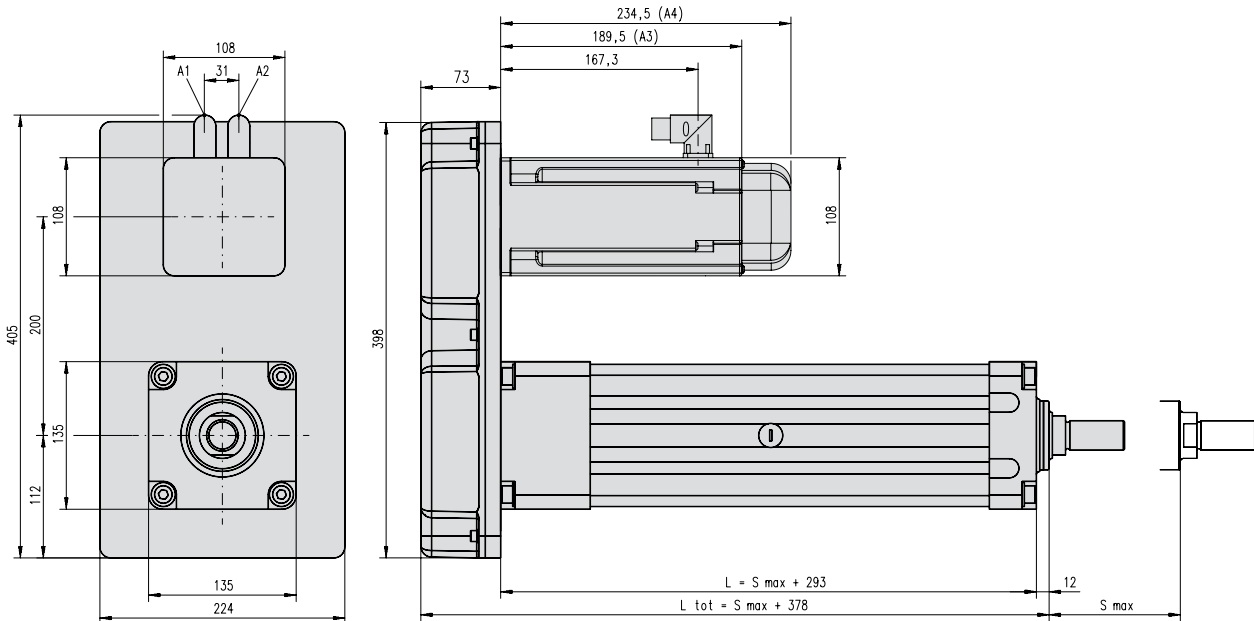
<sup>2</sup> Value at full retraction - decreases as the actuator extends.

- » Ordering Key - see page 78
- » Mounting Options - see page 50
- » Adapter Options - see page 54
- » Glossary - see page 80

# ECT130

## Parallel B53 AC Servo Motor

<b>Dimensions</b>	<b>Projection</b>
METRIC	



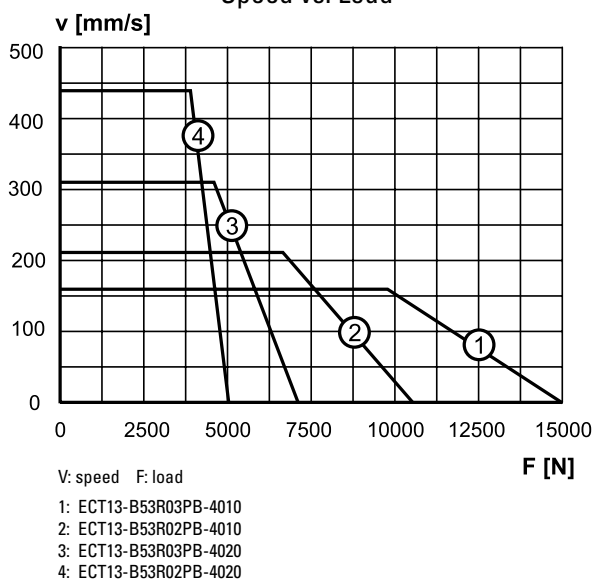
S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

A1: power connector  
A2: resolver connector  
A3: without brake  
A4: with brake

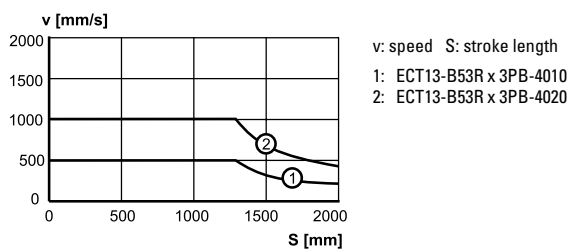
<b>Cover tube length (L)</b>	<b>[mm]</b>	$L = S \text{ max} + 293$
<b>Retracted length (L tot)</b>	<b>[mm]</b>	$L \text{ tot} = S \text{ max} + 378$
<b>Weight of unit</b>	<b>[kg]</b>	$\text{kg} = 39,9 + 0,03 \times S \text{ max}$

### Performance Diagrams

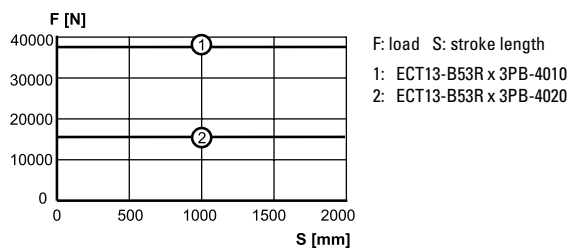
Speed vs. Load



Critical Speed vs. Stroke

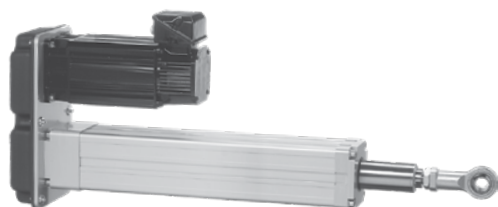


Column Load Limit vs. Stroke



## ECT130

### Parallel B63 AC Servo Motor



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Belt gear
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 2000 mm
- Load up to 21500 N
- Speed up to 440 mm/s

#### General Specifications

Parameter	ECT130
Profile size (w × h)	130 × 130 mm
Screw type	ball screw
Gear box	belt gear
Motor type	brushless AC servo motor
Motor designation	AKM63K-ANCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter		ECT130
Stroke length (S), maximum	[mm]	2000
Maximum dynamic load (Fx) <sup>1</sup>	[N]	
ECT13-B63R03PB-4010		21500
ECT13-B63R02PB-4010		15500
ECT13-B63R03PB-4020		10500
ECT13-B63R02PB-4020		7500
Maximum load (Fy, Fz) <sup>2</sup>	[N]	500
Maximum load torque (My, Mz)	[Nm]	150
Maximum speed	[mm/s]	
ECT13-B63R03PB-4010		160
ECT13-B63R02PB-4010		220
ECT13-B63R03PB-4020		320
ECT13-B63R02PB-4020		440
Operating temperature limits	[°C]	-20 – 70
Screw diameters	[mm]	40
Screw leads	[mm]	10, 20
Backlash	[mm]	0,21
Repeatability	[± mm]	0,05
Protection class, standard		IP65

<sup>1</sup> At a 100% duty cycle.

<sup>2</sup> Value at full retraction - decreases as the actuator extends.

» Ordering Key - see page 78

» Mounting Options - see page 50

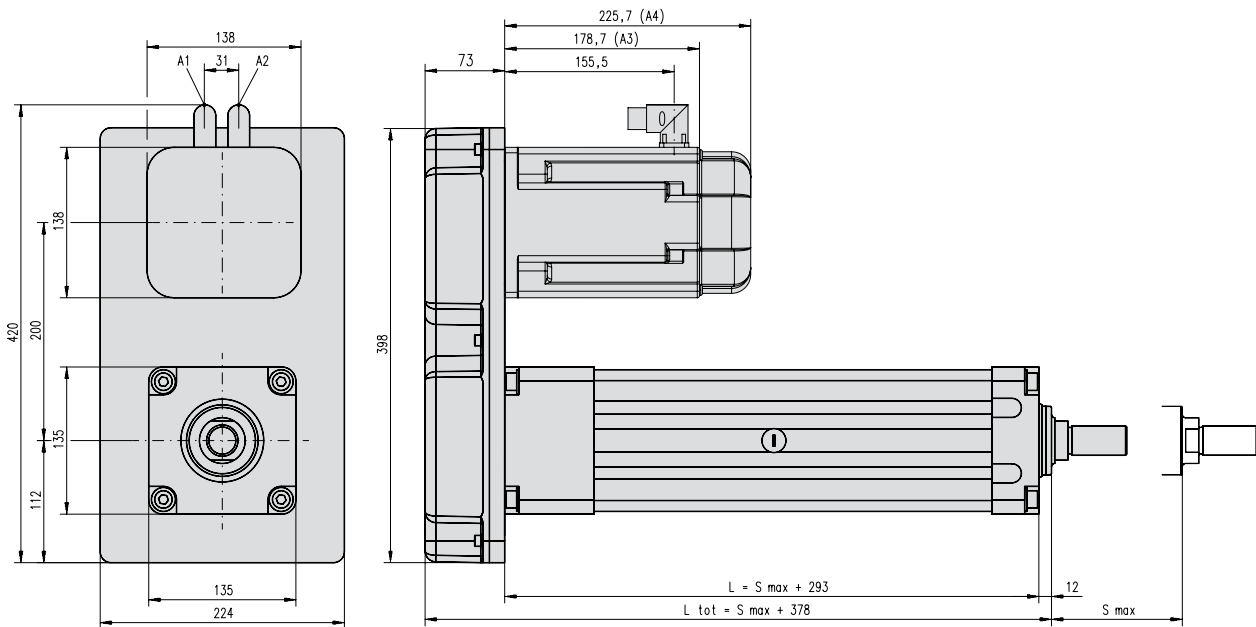
» Adapter Options - see page 54

» Glossary - see page 80

# ECT130

## Parallel B63 AC Servo Motor

<b>Dimensions</b>	<b>Projection</b>
METRIC	



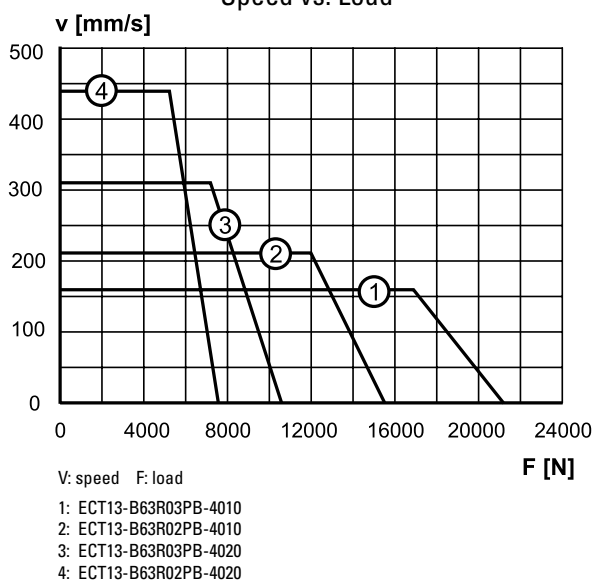
S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

A1: power connector  
A2: resolver connector  
A3: without brake  
A4: with brake

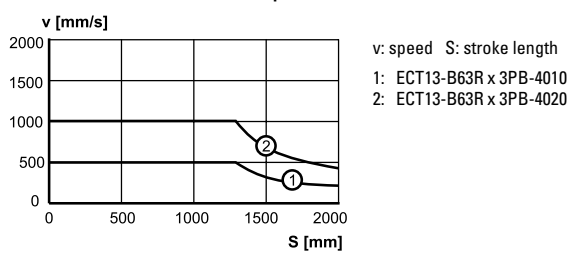
<b>Cover tube length (L)</b>	<b>[mm]</b>	$L = S \text{ max} + 293$
<b>Retracted length (L tot)</b>	<b>[mm]</b>	$L \text{ tot} = S \text{ max} + 378$
<b>Weight of unit</b>	<b>[kg]</b>	$\text{kg} = 43,6 + 0,03 \times S \text{ max}$

### Performance Diagrams

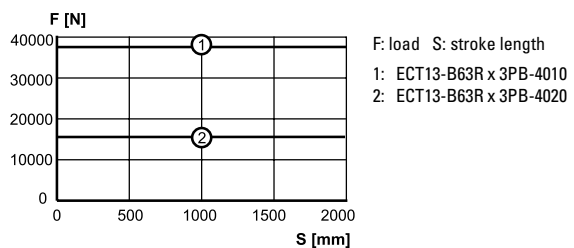
Speed vs. Load



Critical Speed vs. Stroke



Column Load Limit vs. Stroke



## ECT130

### Direct Drive, Inline B53 AC Servo Motor

- » Ordering Key - see page 79
- » Mounting Options - see page 50
- » Adapter Options - see page 54
- » Glossary - see page 80



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Direct drive
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 2000 mm
- Load up to 4900 N
- Speed up to 2000 mm/s

#### General Specifications

Parameter	ECT130
Profile size (w × h)	130 × 130 mm
Screw type	ball screw
Gear box	no, direct drive
Motor type	brushless AC servo motor
Motor designation	AKM53K-ANCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT130
Stroke length (S), maximum [mm]	2000
Maximum dynamic load (Fx) <sup>1</sup> [N]	ECT13-B53R01LD-4010 4900 ECT13-B53R01LD-4020 2250 ECT13-B53R01LD-4040 700
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	ECT13-B53R01LD-4010 400 ECT13-B53R01LD-4020 1000 ECT13-B53R01LD-4040 2000
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	40
Screw leads [mm]	10, 20, 40
Backlash [mm]	0,21
Repeatability [± mm]	0,05
Protection class, standard	IP65

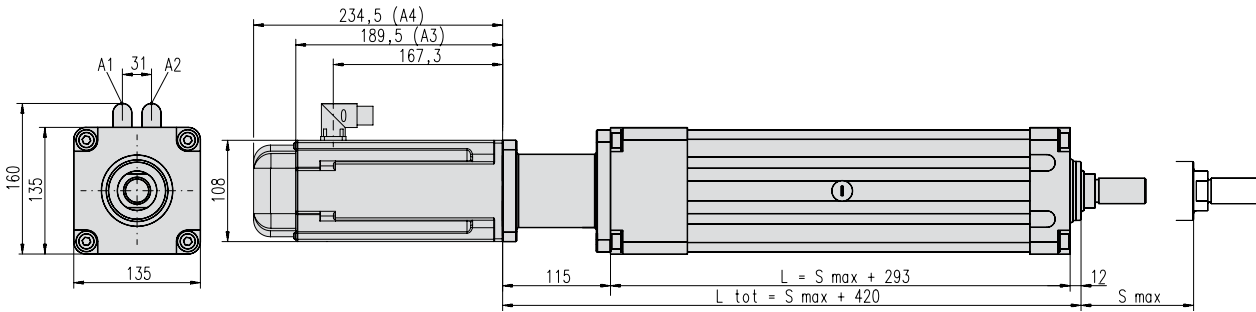
<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

# ECT130

## Direct Drive, Inline B53 AC Servo Motor

Dimensions	Projection
METRIC	



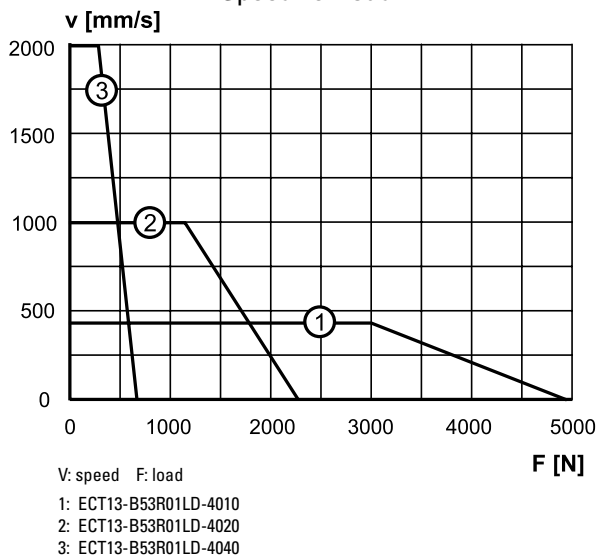
S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

A1: power connector  
A2: resolver connector  
A3: without brake  
A4: with brake

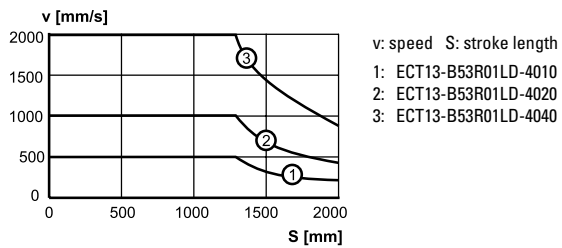
<b>Cover tube length (L)</b>	<b>[mm]</b>	$L = S \text{ max} + 293$
<b>Retracted length (L tot)</b>	<b>[mm]</b>	$L \text{ tot} = S \text{ max} + 420$
<b>Weight of unit</b>	<b>[kg]</b>	$\text{kg} = 28,7 + 0,03 \times S \text{ max}$

### Performance Diagrams

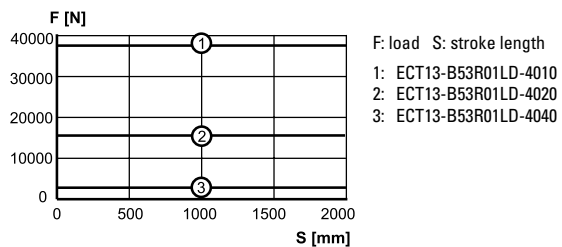
Speed vs. Load



Critical Speed vs. Stroke



Column Load Limit vs. Stroke





## ECT130

### Direct Drive, Inline B63 AC Servo Motor

- » Ordering Key - see page 79
- » Mounting Options - see page 50
- » Adapter Options - see page 54
- » Glossary - see page 80



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Direct drive
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 2000 mm
- Load up to 7400 N
- Speed up to 2000 mm/s

#### General Specifications

Parameter	ECT130
Profile size (w × h)	130 × 130 mm
Screw type	ball screw
Gear box	no, direct drive
Motor type	brushless AC servo motor
Motor designation	AKM63K-ANCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT130
Stroke length (S), maximum [mm]	2000
Maximum dynamic load (Fx) <sup>1</sup> [N]	7400
ECT13-B63R01LD-4010	3400
ECT13-B63R01LD-4020	1400
ECT13-B63R01LD-4040	
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	400
ECT13-B63R01LD-4010	1000
ECT13-B63R01LD-4020	2000
ECT13-B63R01LD-4040	
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	40
Screw leads [mm]	10, 20, 40
Backlash [mm]	0,21
Repeatability [± mm]	0,05
Protection class, standard	IP65

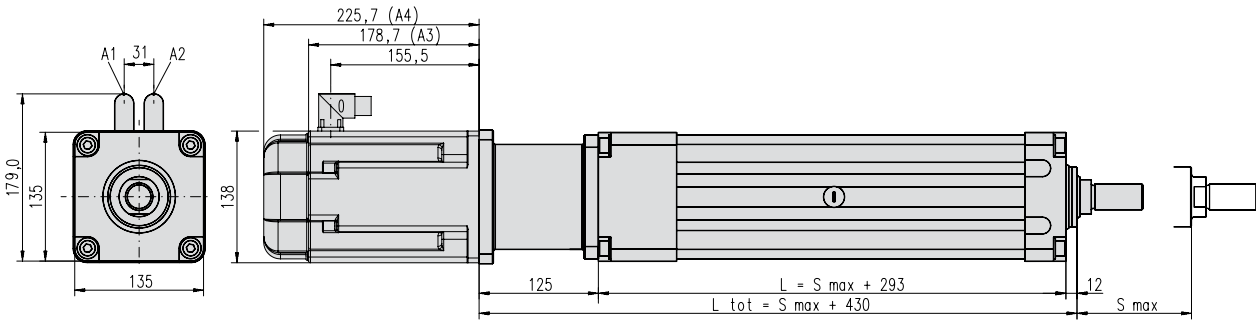
<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

# ECT130

## Direct Drive, Inline B63 AC Servo Motor

Dimensions	Projection
METRIC	



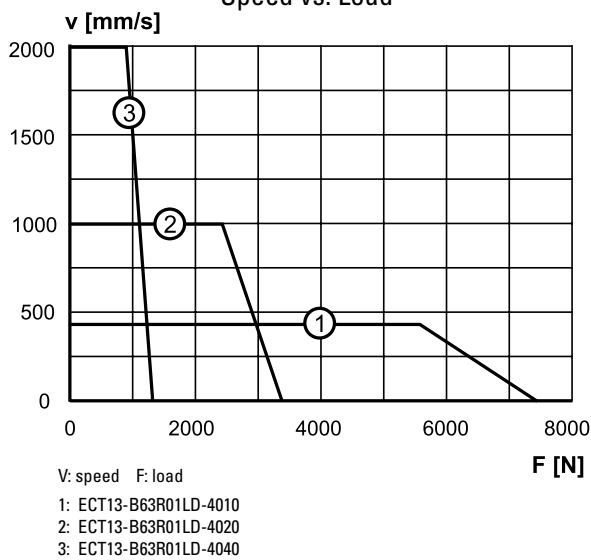
S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

A1: power connector  
A2: resolver connector  
A3: without brake  
A4: with brake

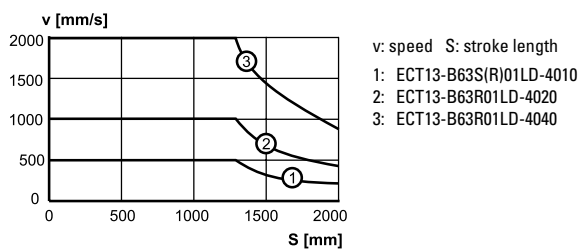
<b>Cover tube length (L)</b>	<b>[mm]</b>	$L = S \text{ max} + 293$
<b>Retracted length (L tot)</b>	<b>[mm]</b>	$L \text{ tot} = S \text{ max} + 430$
<b>Weight of unit</b>	<b>[kg]</b>	$\text{kg} = 32,8 + 0,03 \times S \text{ max}$

### Performance Diagrams

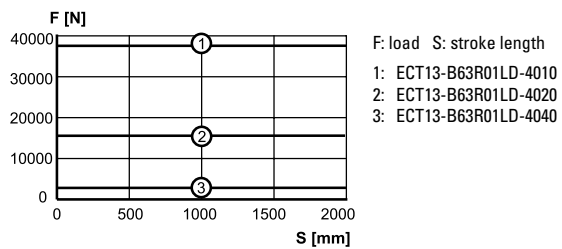
Speed vs. Load



Critical Speed vs. Stroke



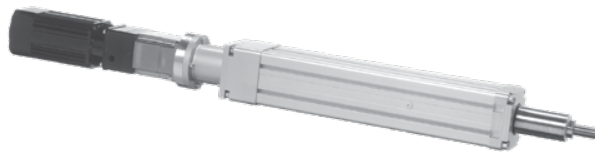
Column Load Limit vs. Stroke



## ECT130

### Planetary Gear, Inline B53 AC Servo Motor

- » Ordering Key - see page 79
- » Mounting Options - see page 50
- » Adapter Options - see page 54
- » Glossary - see page 80



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Planetary gear
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 2000 mm
- Load up to 38000 N
- Speed up to 200 mm/s

#### General Specifications

Parameter	ECT130
Profile size (w × h)	130 × 130 mm
Screw type	ball screw
Gear box	planetary gear
Motor type	brushless AC servo motor
Motor designation	AKM53K-ANCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT130
Stroke length (S), maximum [mm]	2000
Maximum dynamic load (Fx) <sup>1</sup> [N]	38000
ECT13-B53R10LP-4010	22500
ECT13-B53R05LP-4010	11000
ECT13-B53R05LP-4020	
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	50
ECT13-B53R10LP-4010	100
ECT13-B53R05LP-4010	200
ECT13-B53R05LP-4020	
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	40
Screw leads [mm]	10, 20
Backlash [mm]	0,21
Repeatability [± mm]	0,05
Protection class, standard	IP65

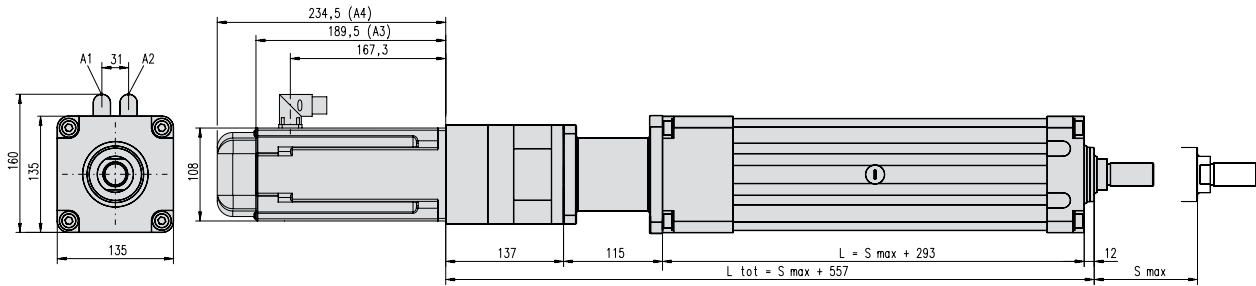
<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

# ECT130

## Planetary Gear, Inline B53 AC Servo Motor

Dimensions	Projection
METRIC	



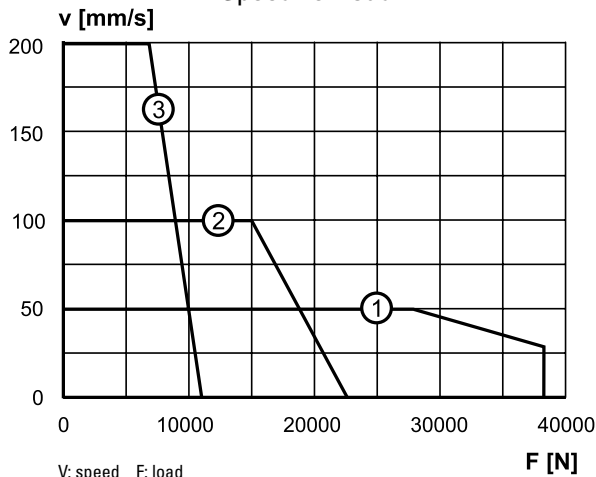
S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

A1: power connector  
A2: resolver connector  
A3: without brake  
A4: with brake

<b>Cover tube length (L)</b>	<b>[mm]</b>	$L = S \text{ max} + 293$
<b>Retracted length (L tot)</b>	<b>[mm]</b>	$L \text{ tot} = S \text{ max} + 557$
<b>Weight of unit</b>	<b>[kg]</b>	$\text{kg} = 33,9 + 0,03 \times S \text{ max}$

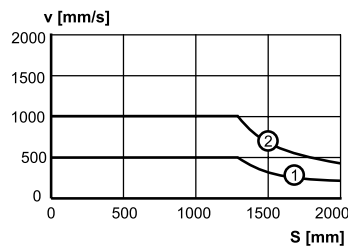
### Performance Diagrams

Speed vs. Load



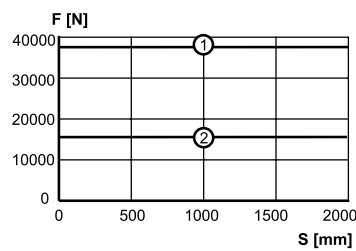
V: speed F: load  
1: ECT13-B53R10LP-4010  
2: ECT13-B53R05LP-4010  
3: ECT13-B53R05LP-4020

Critical Speed vs. Stroke



v: speed S: stroke length  
1: ECT13-B53R xx LP-4010  
2: ECT13-B53R xx LP-4020

Column Load Limit vs. Stroke



F: load S: stroke length  
1: ECT13-B53R xx LP-4010  
2: ECT13-B53R xx LP-4020

## ECT130

### Planetary Gear, Inline B63 AC Servo Motor

- » Ordering Key - see page 79
- » Mounting Options - see page 50
- » Adapter Options - see page 54
- » Glossary - see page 80



#### Standard Features and Benefits

- Robust and reliable
- Brushless AC servo motor
- Planetary gear
- Ball screw
- Hard-chromed steel extension tube
- IP65 as standard
- Stroke up to 2000 mm
- Load up to 33000 N
- Speed up to 200 mm/s

#### General Specifications

Parameter	ECT130
Profile size (w × h)	130 × 130 mm
Screw type	ball screw
Gear box	planetary gear
Motor type	brushless AC servo motor
Motor designation	AKM63K-ANCNR-00
Motor feedback	resolver
Motor connection	connector
Motor brake	no, optional
Lubrication	single point lubrication
Certificates	CE
Options	<ul style="list-style-type: none"> <li>• motor brake (24 Vdc)</li> <li>• mounting options</li> <li>• adapter options</li> </ul>

#### Performance Specifications

Parameter	ECT130
Stroke length (S), maximum [mm]	2000
Maximum dynamic load (Fx) <sup>1</sup> [N]	33000
ECT13-B63R05LP-4010	16000
ECT13-B63R05LP-4020	
Maximum load (Fy, Fz) <sup>2</sup> [N]	500
Maximum load torque (My, Mz) [Nm]	150
Maximum speed [mm/s]	100
ECT13-B63R05LP-4010	200
ECT13-B63R05LP-4020	
Operating temperature limits [°C]	-20 – 70
Screw diameters [mm]	40
Screw leads [mm]	10, 20
Backlash [mm]	0,21
Repeatability [± mm]	0,05
Protection class, standard	IP65

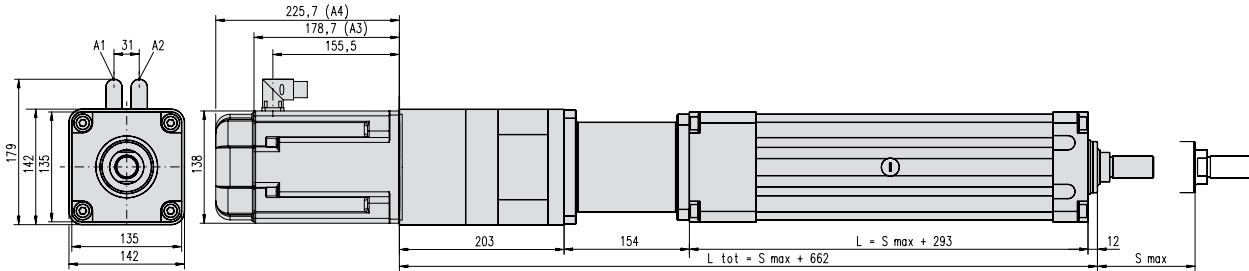
<sup>1</sup>At a 100% duty cycle.

<sup>2</sup>Value at full retraction - decreases as the actuator extends.

# ECT130

## Planetary Gear, Inline B63 AC Servo Motor

Dimensions	Projection
METRIC	



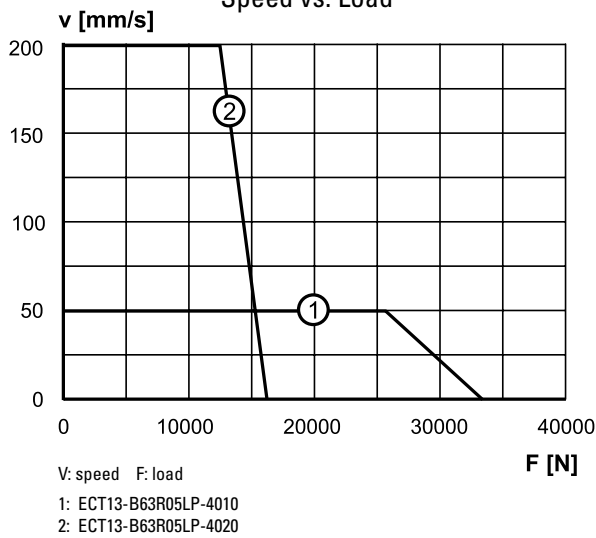
S max: maximum stroke (ordering stroke in mm)  
L: cover tube length  
L tot: retracted length

A1: power connector  
A2: resolver connector  
A3: without brake  
A4: with brake

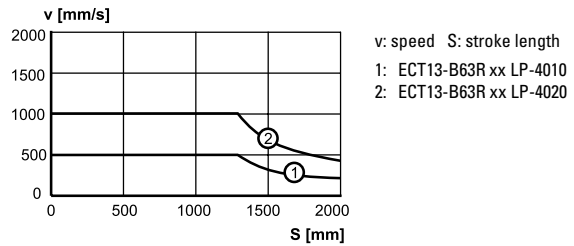
<b>Cover tube length (L)</b>	<b>[mm]</b>	$L = S \text{ max} + 293$
<b>Retracted length (L tot)</b>	<b>[mm]</b>	$L \text{ tot} = S \text{ max} + 662$
<b>Weight of unit</b>	<b>[kg]</b>	$\text{kg} = 46,8 + 0,03 \times S \text{ max}$

### Performance Diagrams

Speed vs. Load



Critical Speed vs. Stroke



Column Load Limit vs. Stroke

