

# Excellent Electric Actuators



**concens**   
- *excellent electric actuators*





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# The Competent Provider of Excellent Electric Actuators

Concens is a market challenger in the electric actuator industry.

Since our inception in 2003, we have focused on serving customers who require compact, well-designed electric actuators for use in applications where design, appearance and function play a crucial role.

## Actuator Solutions for Any Sector

We specialize in supplying high-quality actuators and controllers for use in a variety of sectors as different as rehab, industrial automation, medical and building technology just to mention a few.

At Concens, we make it a top priority to produce designs that integrate the various products – actuators, controllers, battery-solutions or remote controllers – into a unified, highly satisfactory solution.

## Strong, Compact & Outstanding Design

The Concens standard range includes two lines – con35 and con50 – which differ in size and performance. Both actuators can be configured according to color, strength, dimensions and other parameters, and they are both available in special versions, including ATEX and UL.

The flagship of our product range is the stainless steel actuator, which is ideal for use in the food industry.

The elegant and compact design of our actuators never compromises their strength. The Concens' con50 has a load capacity up to 4500 Newton.

## The Preferred Partner for You

All high-quality actuators and controllers are designed, developed, produced and tested in Denmark.

Concens wants to be the preferred partner for customers looking for uncompromising design and outstanding value.

...the preferred partner for customers looking for uncompromising design and outstanding value





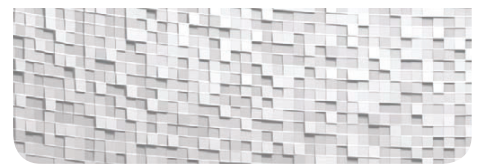
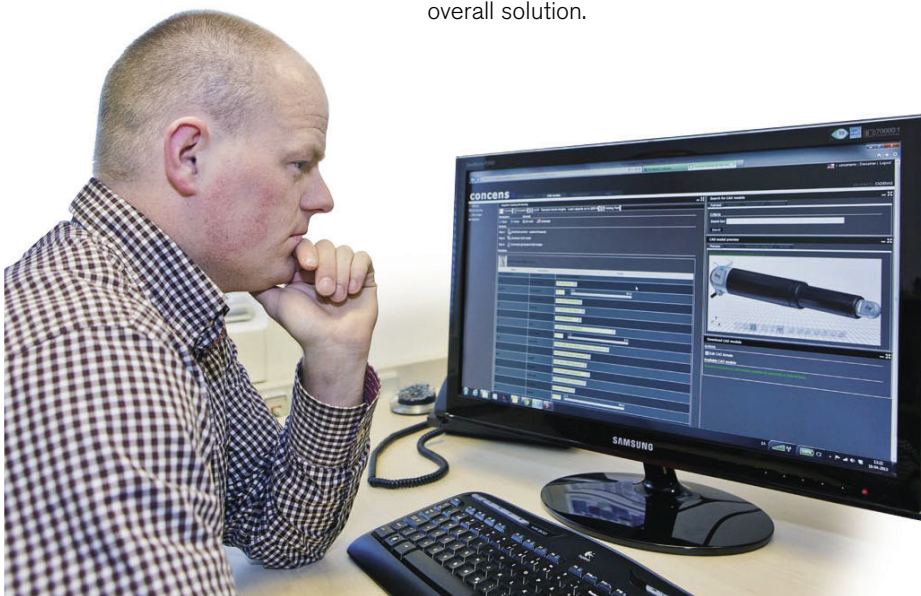
# Driven by Innovation, Perfection & Dedication

During the early 1990s a Danish company required an inline actuator. As this was not available on the market, a new design was developed. This new design was nominated to several design prizes, and based on that Concens was founded in Denmark in 2003.

From the very start the goal of Concens was to design and market state-of-the-art actuators, and thereby create new opportunities for people and companies to improve value, quality and competence.

Concens is driven by strong values of commitment, versatility and flexibility. We aim to be at the forefront of developments within our field in an ever changing market as well as to combine design, size and functionality with customers' requirements

We are not satisfied until the tiniest detail is perfect whilst maintaining a clear focus on the overall solution.

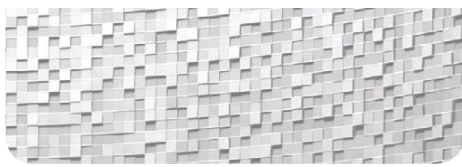


## Features of Concens actuators

- Smallest actuator available worldwide
- Customizable
- Unique, award-winning design
- Stainless steel versions
- Waterproof build-in design (IP 66/68/69K)

## Ideal for applications

- Where design matters
- Where size matters
- Where reliable function matters
- In hazardous, wet or dusty environment



# Your Partner in the Innovative Design Process

## Patents

### Actuator

- Slide Nut  
Pat No.: US 6,546,825 –  
EP 1171726 – EP 00918720.4 –  
JP 09/958,878
- Noise damped linear actuator  
Pat No.: PCT/DK2006/000350 –  
PA 2005 00883

### Design (Europe)

- DR 2001 00020

### Trademark & logo

- VR 2003 03471

Concens offer a wide range of standard products, which can be combined and customized to provide more than a billion variations.

Therefore, we are committed to share our in-depth knowledge of the actuator world, and customers can get access to competent assistance from our support team either from our local partner or directly from our head office. In fact, many customers gain from our knowledge of industry standards and compliances when implementing actuator solutions.

### Commitment, Versatility & Flexibility

We partner with your industrial designers and engineers to design and configure efficient actuator solutions that meet the specific individual needs of your company. Samples are very often used to prove the benefits of Concens inline actuators.

During implementation we focus on optimizing the actuator solution as well as eliminating faults. This is backed up by consistent delivery of high quality actuators including small quantities or urgent requirements.

### 3D Configurator Tool Available

To assist designers and engineers, we've made a 3D configurator available on our website.

After configuring your 3D models, you can download and save them as CAD files for further use in the design process.

This commitment creates long-term working relationships between Concens and our customers.



# Ideas for Applications

The Concens actuator is capable of raising, lowering, lifting, pushing and pulling. Through innovation and design, the Concens actuator has been created for use in a wide variety of applications.

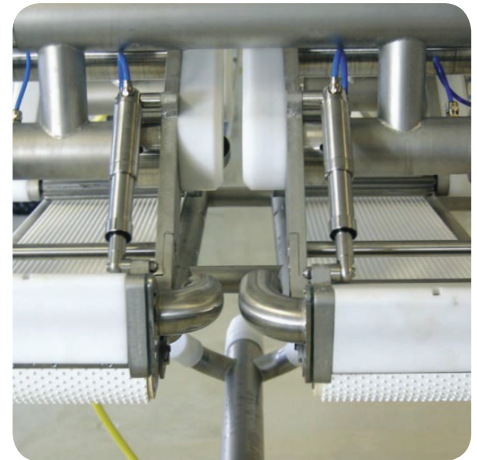
The actuators can be discreetly integrated into a number of environments into which traditional actuators are unable to fit. The Concens actuator is stable and reliable.

## Examples of Applications for Actuator Solutions

The mentioned applications may give you an idea of the versatility of Concens actuators and solutions.

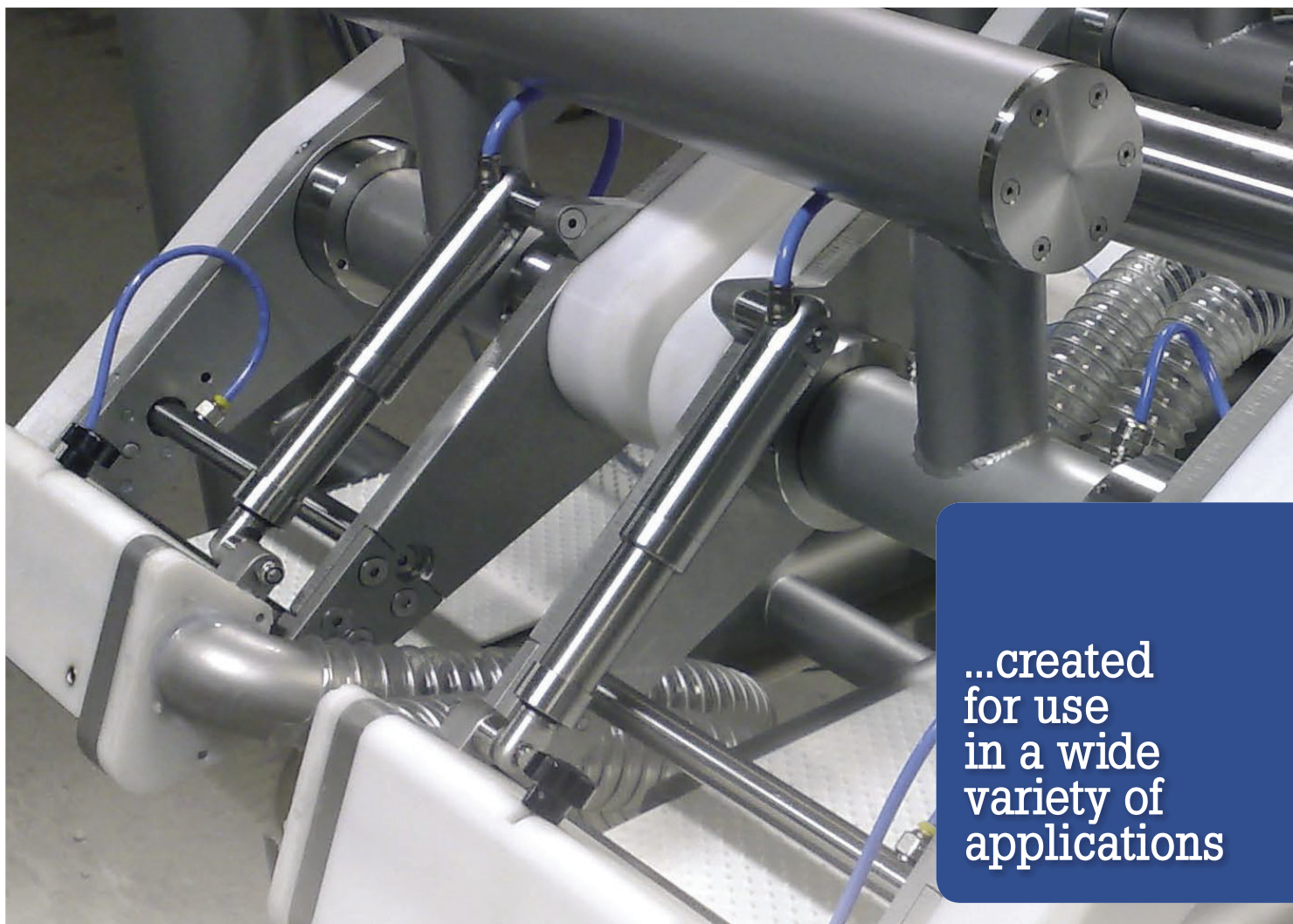
Our support team can help you to decide if and how a Concens actuator solution will optimize your product.

Within the rehab sector Concens actuator solutions have been built into products like manual and automatic wheelchairs, toilet & shower chairs, personal lifts & hoists, operation tables as well as clinic and therapeutic chairs and benches.



Concens actuators are ideal for industrial automation for process and manufacturing machines. Furthermore, the stainless steel actuator program provides new possibilities in many areas within e.g. the food and medical industry. ↑





...created  
for use  
in a wide  
variety of  
applications



Actuators are excellent for a variety of applications from small products to large constructions such as gangway fingers at airports for loading and unloading of passengers. Other applications include handicap cars, boats, trains, buses and special vehicles. ↑



Building technology is an increasing industry for Concens. The elegant, compact inline actuator solutions are ideal for subtle implementation in windows and doors for automatic control of sun screens, ventilation as well as fire protection.



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# Excellent Electric Actuators

From the very start Concens have focused on designing versatile, high efficiency in-line electric actuators with an elegant design, small dimensions and excellent features.

The program consists of two actuator series that are ideal where size is limited by design or functionality. The actuators can be combined and customised to provide more than a billion variations.

## General Features

- Small and compact size
- Attractive design and RAL colors
- Powder-coated steel with a sturdy design that protects motor and electrics
- Stainless steel models available
- Hygienic, waterproof, and easy to clean (IP66, IP68 and IP69K)
- Low power consumption with high efficiency 12/24V DC industrial motor with planetary gear
- Compatible controllers, handsets and batteries for mobile use are available.
- Easy interface with PLCs and other controllers
- Adaptable to industry speed and load requirements

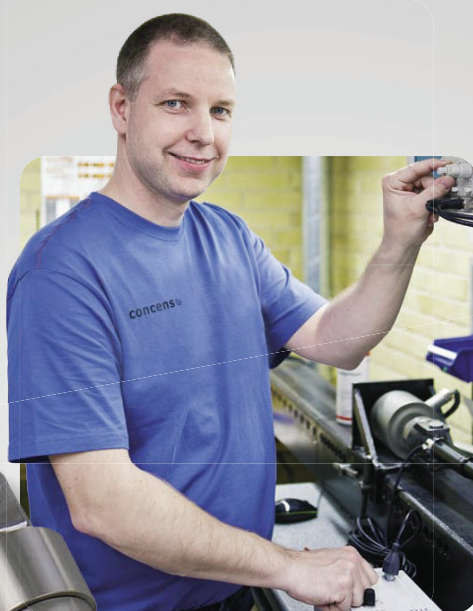
## Customization options

All actuators can be configured to almost endless specifications, just to mention a few:

- Hall sensors for positioning or synchronization
- ATEX zone 22, Class II 3 D approval
- EU/UL/CSA 60.601 certificate
- Low noise version
- Eskimo (-40°C to +70°C) version
- Other stroke lengths
- Customized brackets



...versatile,  
efficient  
and elegant  
design



### con35

- Load capacity up to 2200 N
- Speed at maximum load from 3 to 33 mm/s
- Stroke lengths from 50 to 750mm
- Dimensions from 160mm + stroke length

### con50

- Load capacity up to 4500 N
- Speed at maximum load from 4 to 70 mm/s
- Stroke lengths from 50 to 750mm
- Dimensions from 240mm + stroke length



# Intelligent Control Systems

Concens offer advanced, digitally programmable controllers for the electric actuators.

Alternatively, where a control system already exists, this may be used to control the actuators.

## C2 Actuator Controllers

Concens provide basic actuator controllers, which allow electronic control and protection of the actuator as well as the equipment that the actuator is connected to.

### C2-10 Actuator Controller

C2-10 was developed for controlled ON-OFF driving and direction change of the Concens actuators as well as advanced current limit features.

#### Key Features:

- Adjustable soft start (acceleration ramp)
- Adjustable soft stop (deceleration ramp)
- Adjustable current limit
- High momentary load capacity
- High efficiency
- Easy interfacing to PLC etc.
- Connectors and terminals for actuators, control and power
- DIN-rail fittable
- Status LED

### C2-20 Actuator Controller - with Advanced Control Functions

Concens offer advanced, digitally programmable controllers for electric actuators with two hall sensors.

The C2-20 servo controller provides advanced positioning and control of actuators through easy and flexible integration with the application.

- Precise stroke control from analog voltage input
- Full H-bridge DC motor controller
- Programmable using the C2-PROG interface unit or a PC with a USB cable and dongle

## C3 Battery-based Control System

The C3 control system is a complete solution for battery-powered actuators. Standard systems include IP50 protection with IP65 protection available.

- Up to four actuators
- Wired or wireless handsets
- Optional external emergency stop
- Standard handsets with three different button location layout options
- Up to 10 customizable buttons



...advanced,  
digitally  
programmable  
controllers



### Batteries - making electric actuators mobile

Concens supply a compatible battery solution for the electric actuators. The rechargeable 24 V DC NiMH battery is easily mounted in the actuator control box. The solution offers optional IP65 protection.

#### Battery features:

- 7 A maximum continuous current
- 16 A short-time peak
- 1400 mAh capacity
- No memory effect
- Build-in thermostat to prevent short-circuit damage

#### Charger features:

- 110 - 240 VAC power supply
- EU, UK, US and Australian mains connector
- 5 to 8 hour charging time
- Charging and fully-charged indicator light
- Mains indicator light
- Any RAL colour



Request for Information

This template is a tool for gathering essential information in order to advise the best technical solution and price based on available information

Product Series	<input type="checkbox"/> con35 <a href="#">- Click for datasheet</a> <input type="checkbox"/> con50 <a href="#">- Click for datasheet</a> <input type="checkbox"/> con60 <a href="#">- Click for datasheet</a>
A=Stroke Length	<input type="checkbox"/> 50 <input type="checkbox"/> 100 <input type="checkbox"/> 150 <input type="checkbox"/> 200 <input type="checkbox"/> 250 <input type="checkbox"/> 300 <input type="checkbox"/> 350 <input type="checkbox"/> 400 <input type="checkbox"/> 500 <input type="checkbox"/> 750 Other: _____
B=Low Noise	<input type="checkbox"/> Standard <input type="checkbox"/> Low Noise (not AISI)
C=Gearing	05-con35: Load < 05/04 (24VDC only) 14-con35: Load < 14/14/19 19-con35: Load < 19/17/43 27-con35: Load < 27/24/66 51-con35: Load < 51/49/81 71-con35: Load < 71/84/100
D=Voltage	<input type="checkbox"/> 12Vf (con35/50 only) <input type="checkbox"/> 24Vf <input type="checkbox"/> 24Vf - ENUL 60.601
E=Pitch	<input type="checkbox"/> 2mm std. - con35 <input type="checkbox"/> 3mm std. - con50 (con35) <input type="checkbox"/> 4mm std. - con60 <input type="checkbox"/> 2mm std. low temp. grease <input type="checkbox"/> 2mm std. high temp. grease <input type="checkbox"/> 3mm 'Spline' and emer. low. <input type="checkbox"/> 3mm std. low temp. grease <input type="checkbox"/> 3mm std. high temp. grease
F=Cable Length	<input type="checkbox"/> 1 meter <input type="checkbox"/> 2 meters <input type="checkbox"/> 3 meters <input type="checkbox"/> 4 meters <input type="checkbox"/> 5 meters <input type="checkbox"/> 6 meters <input type="checkbox"/> 7 meters <input type="checkbox"/> 8 meters <input type="checkbox"/> 9 meters Other: _____
G=Cable & Connector	<input type="checkbox"/> Black, no connector <input type="checkbox"/> Black, Molex Minifit
H=Hall Sensors	<input type="checkbox"/> Without hall sensors <input type="checkbox"/> With hall sensors
I=Steel & IP Class	<input type="checkbox"/> Std. steel, IP66 <input type="checkbox"/> Std. steel, Harsh Env. <input type="checkbox"/> AISI316, IP66 <input type="checkbox"/> AISI316, Harsh Env. <input type="checkbox"/> AISI316, Harsh Env., ATEX

J=Brackets	<input type="checkbox"/> PA (not Harsh Env.) <input type="checkbox"/> PA w/clevis (not Harsh E.) <input type="checkbox"/> Alu <input type="checkbox"/> Alu w/clevis <input type="checkbox"/> AISI316 <input type="checkbox"/> AISI316 w/clevis <input type="checkbox"/> Alu w/spherical bearings
K=Tube Color	<input type="checkbox"/> Black, RAL9005, shine 25
Other:	<input type="checkbox"/> AISI
L=Piston Ring Color	<input type="checkbox"/> Black <input type="checkbox"/> Grey (con35 only) <input type="checkbox"/> Black std. steel (Harsh E.) <input type="checkbox"/> AISI (Harsh Env. only)

Company/Contact person:

Application description:

Operating environment:

Type of Controller :

Certification requirements:

Additional requirements:

Requested amount:

### Actuator Configuration Vocabulary

Built in dimension BID

A = Stroke length  
B = Gear bracket/Low noise  
C = Gearing  
D = Motor voltage  
E = Spindle/pitch  
F = Cable length  
G = Cable color/ connector  
H = Feedback/positioning  
I = Tube material and IP rate  
J = Brackets  
K = Tube color  
L = Piston ring  
M = Nut  
N = Bearing bushing  
O = Top screw  
Q = Motor tube  
R = Actuator tube  
S = Piston tube

Stroke length is defined as the maximum length the actuator can move. Not to be mixed with 'built in dimension', which is measured from center hole in front bracket to center hole in rear bracket.

Cable length is measured 'end-to-end' i.e. including connector (if mounted). Maximum length recommended is 9m.

Standard pitch of lead screw is 2 mm for con35, 3 mm for con50 and 4 mm for con60. However, 3 mm pitch is available for con35 upon request.

Hall sensors are used to keep track of the position of the actuator.

Front and rear brackets are available in PA(not con60), aluminum and stainless steel. They can be with or without clevis. Aluminum brackets can be equipped with spherical bearings. Special brackets can be made upon request.

For IP66 actuators the piston ring (PA)(not con60) is black. HE(Harsh Environment) are stainless steel.

Standard steel actuators are delivered with black motor- and actuator tube as standard. Other RAL colors are available on request.

Three actuator series are available from Concents: con35, con50 and con60.

The gearing of the actuator determines speed and force/load.

Choose motor voltage between 12 and 24 volts. Recommended duty cycle is max 10%.

Concents actuators come with black cable and are delivered without connectors or with Molex Minifit connectors as standard. Other special connectors can be mounted according to customer requirements.

Tube material is painted standard steel (IP66) or stainless steel AISI316 (IP66, HE=Harsh Environment).

Standard ID is used to specify special requirements. Standard actuators have type ID = 00.

concents  
www.concents.com  
Rev06-Nov17-BBN

Concents\_Request for information\_Ver01

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# An Experienced Partner Worldwide

Concens is represented in several countries via partners. Outside these countries Concens handles projects directly from Denmark.

If you require any further information about Concens or our products please check our website or contact your local partner or the head office in Denmark.



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- excellent electric actuators

[www.concens.com](http://www.concens.com)

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