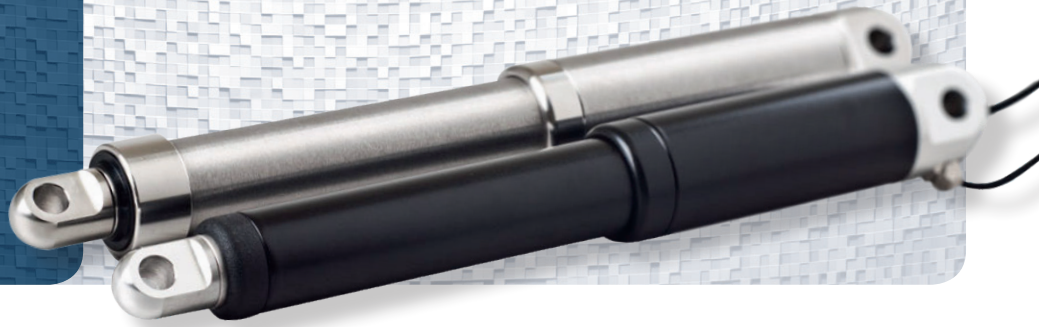


## con50

## Linear In-line Actuator



### Standard Specifications (Specifications for non-standard actuators, eg. HE-version, may vary)

#### Motor/Gear

24 VDC permanent magnet motor (max. current for ratio 4-14-17-24 is 8 A, ratio 49 is 7 A, ratio 84 is 4,5 A, absolute max. voltage is 28 VDC)

Gear ratio		4	14	17	24	49	84
Maximum load	[N]	500	1750	2200	3100	4500	4500
Speed at maximum load	[mm/s]	70	20	17	12	6	4

12 VDC permanent magnet motor (max. current for ratio 4-14-17-24 is 16 A, ratio 49 is 14 A, ratio 84 is 9 A, absolute max. voltage is 14 VDC)

Gear ratio		14	17	24	49	84
Maximum load	[N]	1400	1700	2400	4500	4500
Speed at maximum load	[mm/s]	14	10	6	3	3.5

#### Max. static load/ Self locking force

PA brackets: 4700 N Alu/Stainless steel: 16800 N  
Depending on stroke length for push-applications  
Max. Load limited to 2000 N for stroke lengths > 400 mm

#### Temperature

■ Operation: - 20 °C to + 70 °C ■ Storage: - 40 °C to + 70 °C

#### Protection class

IP66

#### Cable specification

1 m, 2 x 1.3 mm<sup>2</sup> (AWG16), Ø = 6.4 mm, black, Molex Mini-Fit Jr. 6 pin

#### Bending Radius

6 x cable diameter

#### Materials

Motor and actuator tube are powder coated steel  
Piston rod is stainless steel  
Front and rear brackets are PA

#### Duty cycle

Max. 10 % or 2 minutes in use followed by 18 minutes rest

#### Color

Black (RAL 9005)

#### Stroke length/weight

Stroke	[mm]	50	100	150	200	250	300	350	400	500	750
Weight	[kg]	2.1	2.3	2.6	2.8	3.1	3.3	3.6	3.8	4.3	5.6

Actual weight may vary depending on model and options selected

### Options

- Stainless steel versions (AISI 316)
- Brackets in aluminum or stainless steel
- Brackets with clevis
- Brackets with spherical bearings
- Hall sensors for positioning and/or synchronization
- HE (Harsh Environment) version (gear ratio 1:4 not available) Tested according to IP68 and IP69 and passed the criteria for a depth of one meter for one hour. Test reports are available on request.
- Low noise version
- Spline and emergency lowering
- Other cable lengths (1 - 9 m)
- Actuators with the S&EL option are not IP-rated due to the technical design of the front bracket
- Version certified according to IEC60601-1, ANSI/AAMI/ES60601-1, CAN/CSA-22.2 No60601-1 available (24 VDC only)

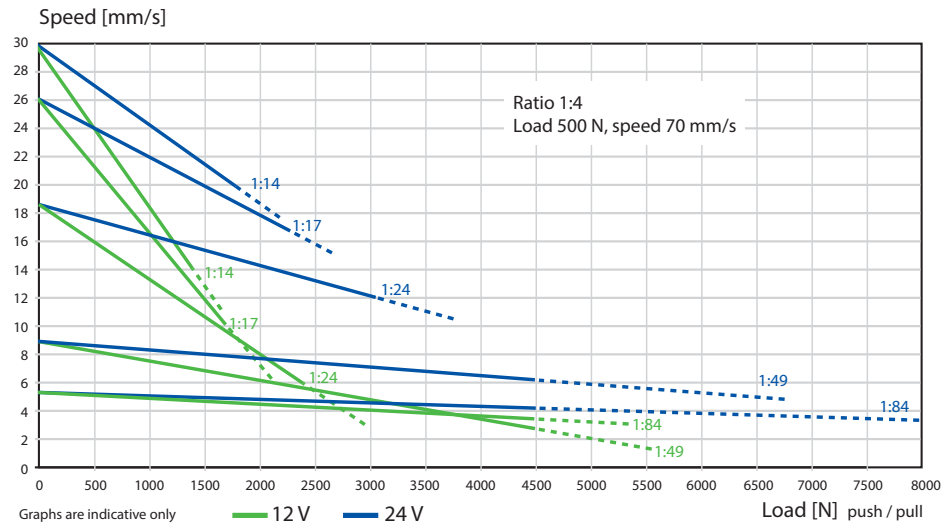
### On Request

- Available in all RAL colors
- Other stroke lengths available
- Customised front and rear brackets
- Customised build-in-dimensions

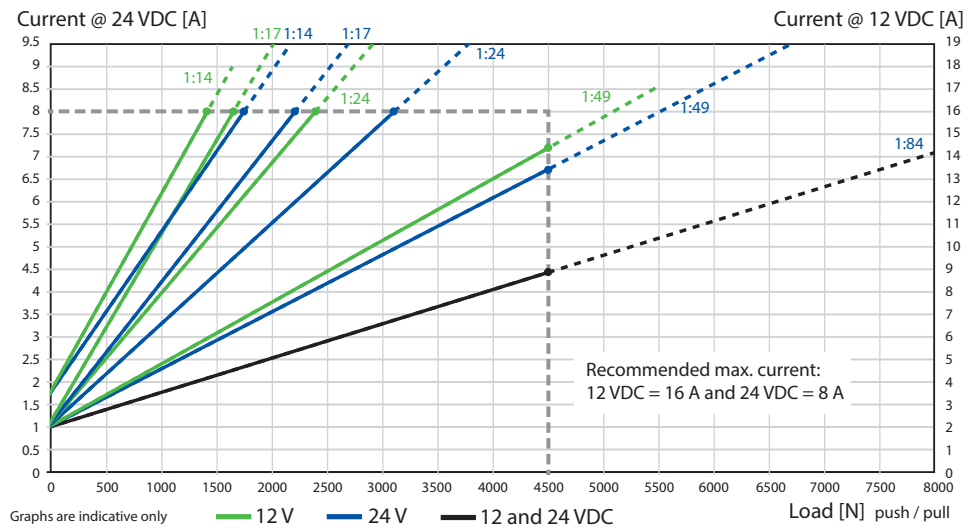
**Contact Concens for any special requirements**

con50

**Speed/Force**



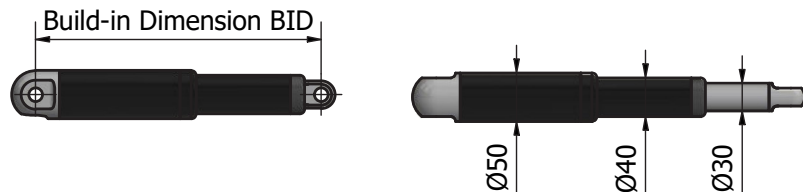
**Force/Current** Use in the dashed area is not recommended. Please contact Concens for further information.



**Dimensions**

Axial backlash:  
+/- 0.5 mm

General  
dimensional  
variation:  
+/- 1 mm

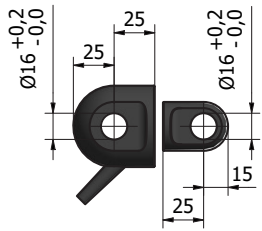


Build-in Dimension BID						
Gear Ratio	Standard	Clevis Rear	Hall	IEC/ANSI/AAMI/ES/CAN/CSA-22.2 No 60601-1	Harsh Environment	Emergency lowering/spline
4, 14, 17, 24	240 mm + stroke	-	+ 15 mm	+ 15 mm	+ 14 mm	+ 23 mm/+ 6 mm
49, 84	255 mm + stroke	-	+ 15 mm	+ 15 mm	+ 14 mm	

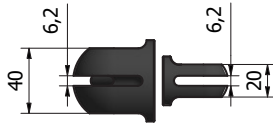
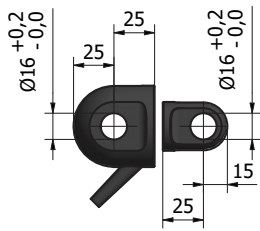
Stroke lengths > 750 mm + 100 mm (On request)

con50

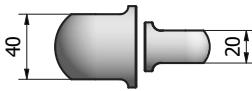
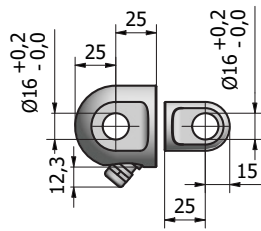
## Standard Brackets



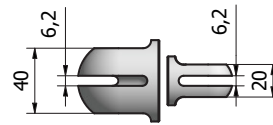
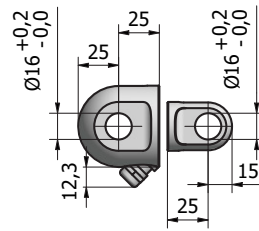
**Polyamid (PA)**  
Max. static load 4700 N  
Max load 3100 N  
(gear ratio 1:24)



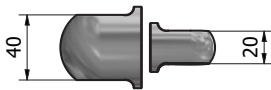
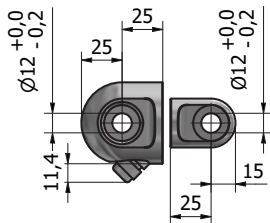
**PA with clevis**  
Max. static load 4700 N  
Max load 3100 N  
(gear ratio 1:24)



**Alu/Stainless steel**  
Max. static load 16800 N



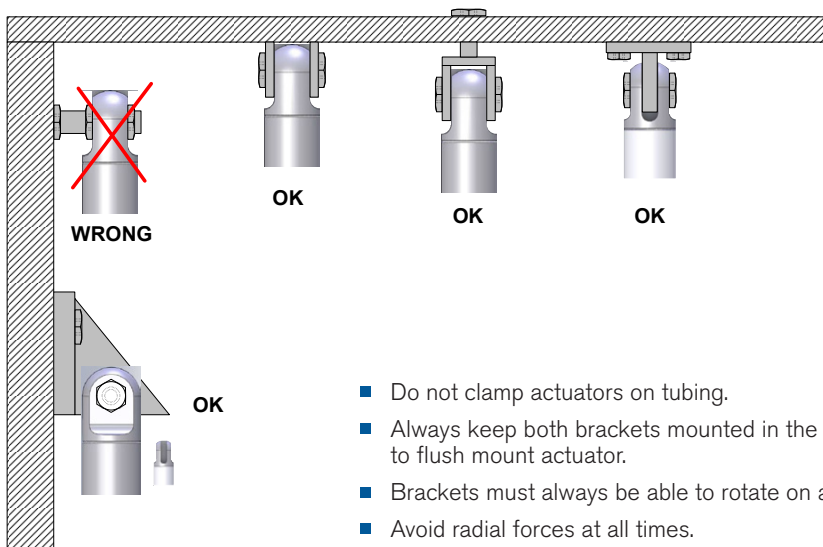
**Alu/Stainless steel with clevis**  
Max. static load 16800 N



**Alu spherical bearings/  
Stainless steel with stainless spherical bearings**  
Max. static load 11000 N  
Max tilt 11°

Please Note:  
AISI316 versions with lock-ring in quality:  
EN 1.4122 (X39CrMo17-1)

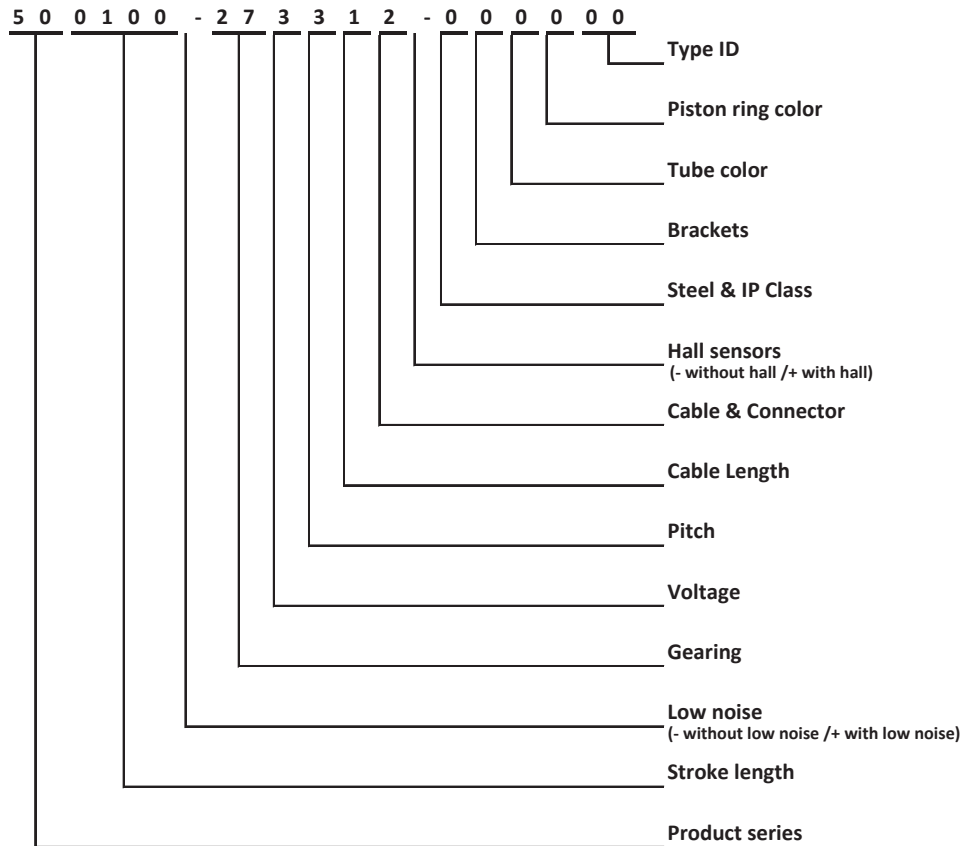
## Recommended Mounting Methods



- Do not clamp actuators on tubing.
- Always keep both brackets mounted in the same orientation and ensure to flush mount actuator.
- Brackets must always be able to rotate on axels in mountings.
- Avoid radial forces at all times.

con50

con50 Item Number Combination



Recommendations and warnings

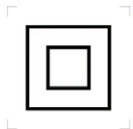
- Never expose the actuator to hammer strike during installation or in other situations.
- Retrofitted bushings should be pressed into the bracket-borings. No hammering.
- Power supply without over-current protection can cause serious damage to the actuator at mechanical end-stop or when actuator is overloaded in another way.
- Keep piston tube clean.
- Longer cable lengths may cause voltage drop which affects the performance of the actuator.
- For medical applications (IEC60601-1, ANSI/AAMI/ES60601-1, CAN/CSA-C22.2 No60601-1):  
Operating temperature + 5 °C to + 48 °C, , Relative humidity 20 % - 70 % atmospheric pressure = 1atm.  
Connect to medically approved supply source only and according to guidelines provided with the source.
- Function of the actuator is subject to the settings of the controller. If using your own controller please contact Concens.
- The dust and water sealing of HE (Harsh Environment) actuators might affect their performance.
- All specifications are for 25 °C ambient – low temperature might affect performance.
- Depending on load and application, nominal and actual stroke length may differ due to internal disc springs not being fully compressed.
- The combination of gearing and stroke can cause limitations in the use of "End limit FW" when using the C2-30 control. See more in the datasheet for C2-30.

Disclaimer

- Concens products are continuously developed, built and tested for highest requirements and reliability but it is always the responsibility of the customer to validate and test the suitability of our products in a given application and environment. Concens products must not be used in safety critical applications.
- We do our utmost to provide accurate and up-to-date information at all times. In spite of that, Concens cannot be held responsible for any errors in the documentation. Specifications are subject to change without prior notice.

For more information, please visit our website at [www.concens.com](http://www.concens.com)

con50



IEC 60417-5172  
Class II equipment



ISO 7010-M002  
Refer to instruction manual/booklet

