

# Linear actuator

CAHB – 20 E series

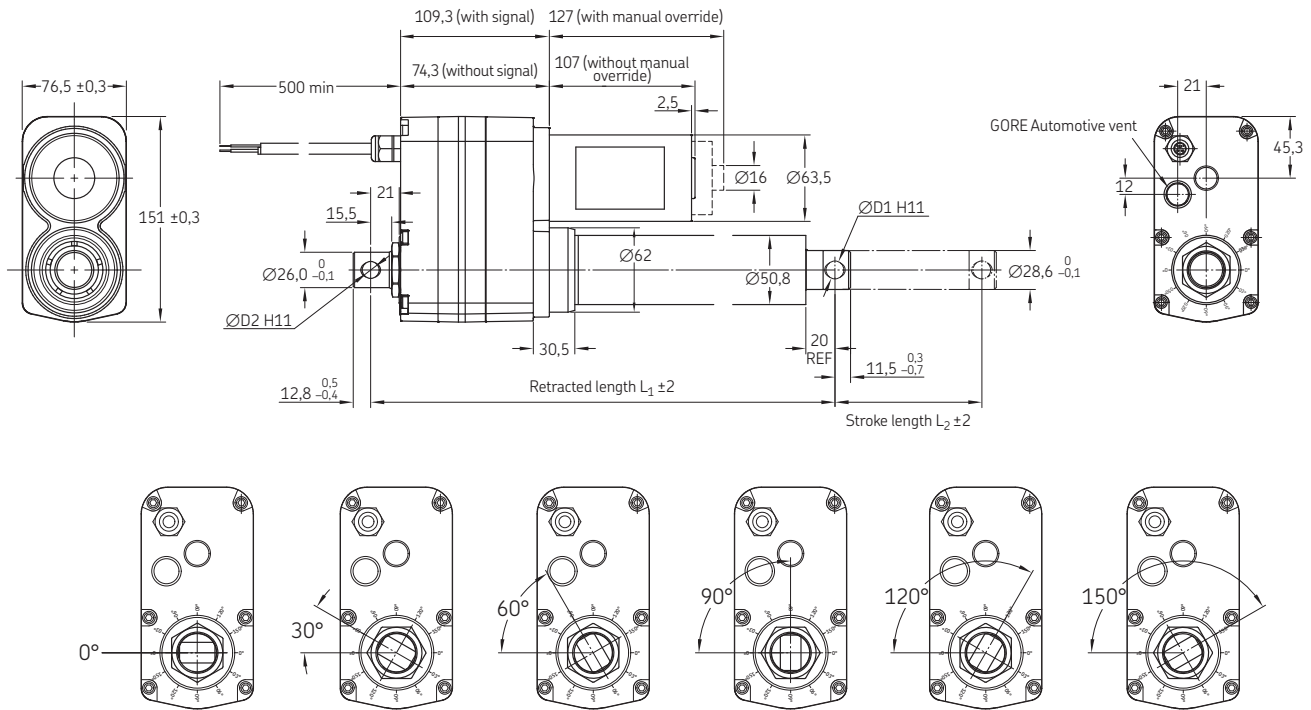
## Features:

- Holding force
- Mechanical overload protection
- Enhanced ingress protection
- Corrosion protection and stainless steel tube
- Manual override option
- Virtuality maintenance free



## Benefits:

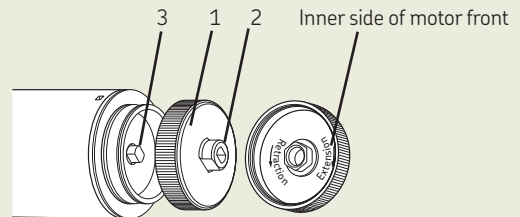
- High productivity
- Reliability and safety
- Save development time
- Cost effectiveness



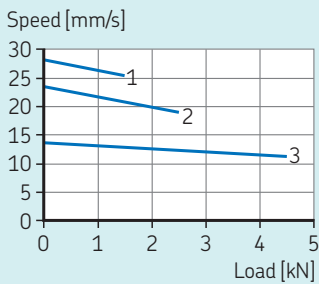
### Heading

	No option <sup>2)</sup>		With signal <sup>2)</sup>	
$L_2$ Stroke [mm]	50 – 305	306 – 700	50 – 305	306 – 700
$L_1$ retracted length	160 + stroke	211 + stroke	195 + stroke	246 + stroke

Unscrew the motor cover (1). Use the slot (2) to rotate the motor shaft (3) in the proper direction

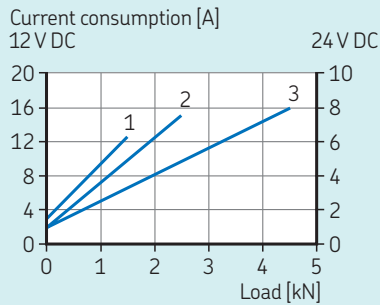


### Speed and load



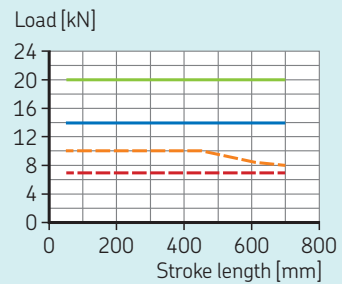
- Load variant 1
- Load variant 2
- Load variant 3

### Current load



- Load variant 1
- Load variant 2
- Load variant 3

### Static load



- Ultimate CAHB-20-xxE (push)
- Ultimate CAHB-20-xxE (pull)
- Recommended CAHB 20-xxE (push)
- Recommended CAHB 20-xxE (pull)

## Technical data CAHB 20

Designation	Symbol	Unit	CAHB 20 / 12 V			CAHB 20 / 24 V		
<b>Performance data</b>								
Rated Push Force	Push F	N	1 500	2 500	4 500	1 500	2 500	4 500
Rated Pull Force	Pull F	N	1 500	2 500	4 500	1 500	2 500	4 500
Max pull / push Force <sup>1)</sup>		N	2 600	3 800	6 300	2 600	3 800	6 300
Holding force <sup>2)</sup>		N						
Speed without load	V <sub>0</sub>	mm/s	27,0	23,5	13,5	29,0	22,0	13,0
Speed with the rated force	V	mm/s	24,5	17,5	10,5	25,5	19,0	11,0
<b>Electric data</b>								
Nominal voltage	U	V DC	12	12	12	24	24	24
Rated current	I	A	14,5	17,0	19,5	6,0	7,5	9,0
Duty cycle	-	%	10% (85/765 s)	10% (85/765 s)	10% (85/765 s)	20% (85/340 s)	20% (85/340 s)	20% (85/340 s)
<b>Mechanical data</b>								
Stroke	s	mm	50 ... 700	50 ... 700	50 ... 700	50 ... 700	50 ... 700	50 ... 700
Backlash	s <sub>backlash</sub>	mm	0,6	0,6	0,6	0,6	0,6	0,6
Weight for 200 mm stroke	-	kg	4,5	4,5	4,5	4,5	4,5	4,5
Colour	-	-	Black	Black	Black	Black	Black	Black
<b>Environment and standards</b>								
Ambient temperature	T <sub>ambient</sub>	°C	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85	-40 ... 85
Degree of protection	-	-	IP 69K/66M					
Standards / EMC	-	-	EN61000-6-2:2005, EN61000-6-4:2007/A1:2011					
Salt spray test	-	-	ISO 9227:2012, 250 hours					

<sup>1)</sup> Upper limit of the pull/push force limited by the clutch  
<sup>2)</sup> Ultimate Static Load, refer to the "Static load" diagrams

## Electrical specification

### Wire connection with no signal

Wire no.	AWG	Colour	Application
1	14	Red	Motor power(+)=> Extension, (-)=> Retraction
2	14	Black	Motor power(-)=> Extension, (+)=> Retraction

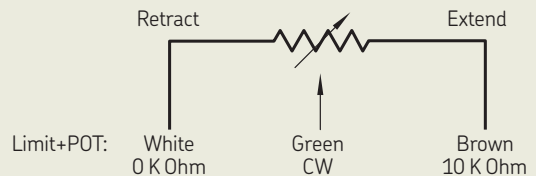
### Feedback resolution list

Actuator type	Hall sensor resolution [pulses/mm]	POT resolution [ohm/mm]
CAHB-20...E	2,76	59,06 if S = 050-125 29,53 if S = 126-250 9,84 if S = 251-700

### Wire connection with potentiometer

Wire no.	AWG	Colour	Application
1	22	Green	See picture description
2	22	White	See picture description
3	22	Brown	See picture description
4	14	Red	Motor power(+)=> Extension, (-)=> Retraction
5	14	Black	Motor power(-)=> Extension, (+)=> Retraction

### Potentiometer



### Wire connection with encoder

Wire no.	AWG	Colour	Application
1	26	Green	Sensor signal 1 Encoder
2	26	Yellow	Sensor signal 2 Encoder
3	26	Black	Sensor power GNO Encoder
4	26	Red	Sensor power 5V Encoder
5	14	Red	Motor power(+)=> Extension, (-)=> Retraction
6	14	Black	Motor power(-)=> Extension, (+)=> Retraction

### Encoder

