

EWELLIX

A Schaeffler Company

Electric cylinders CEMC



Compactness



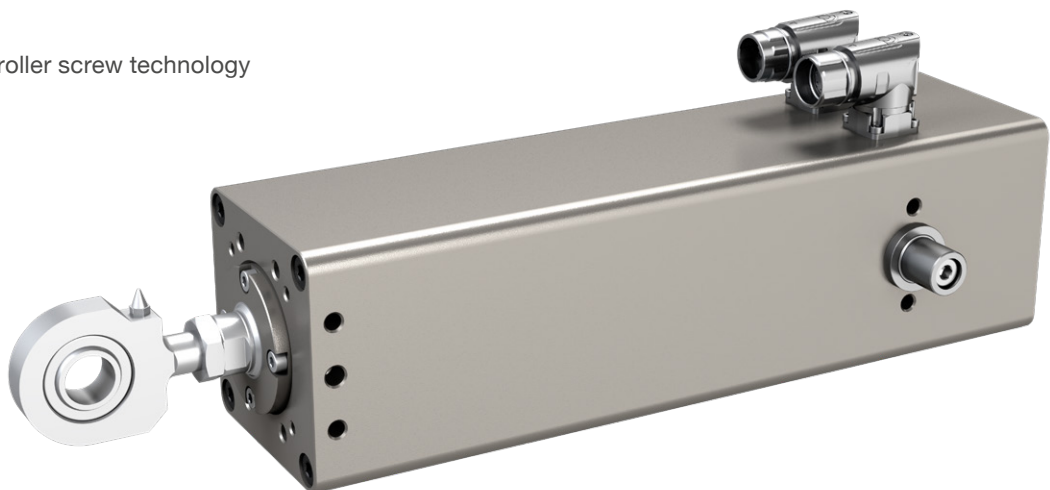
Lightweight



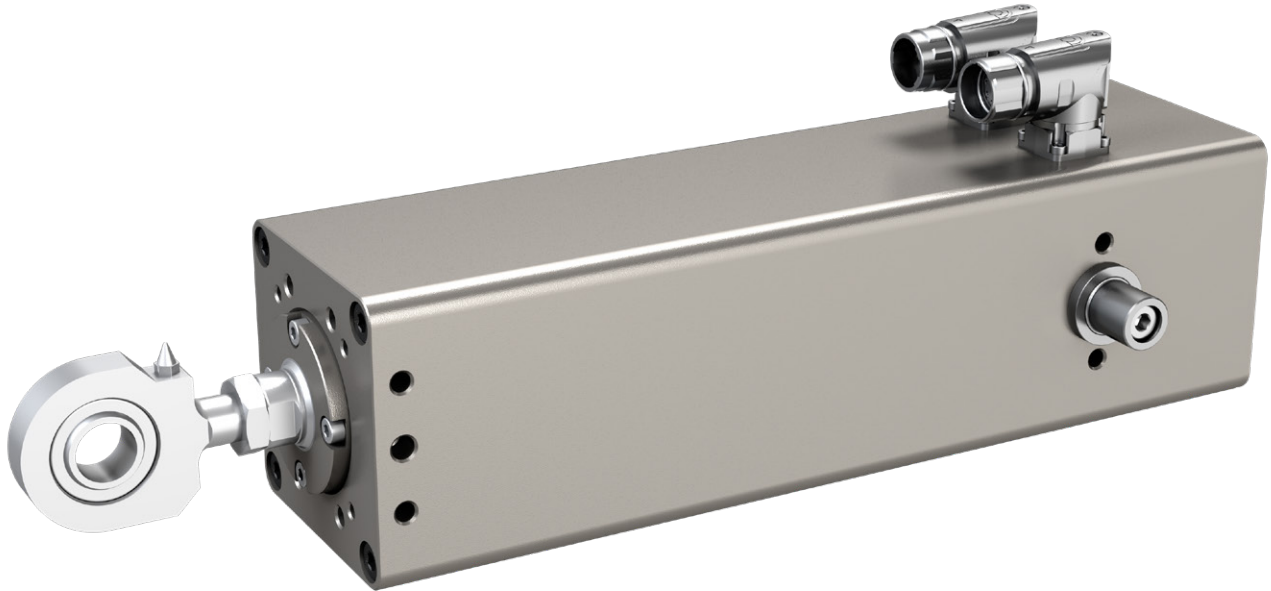
Integrated servo motor



Planetary roller screw technology



Electric cylinders CEMC



Features

- Very compact, fully integrated design
- Planetary roller screw
- Lightweight material
- Highly efficient
- High-resolution position feedback system
- High-speed and acceleration capabilities
- Low maintenance requirements
- High quality components

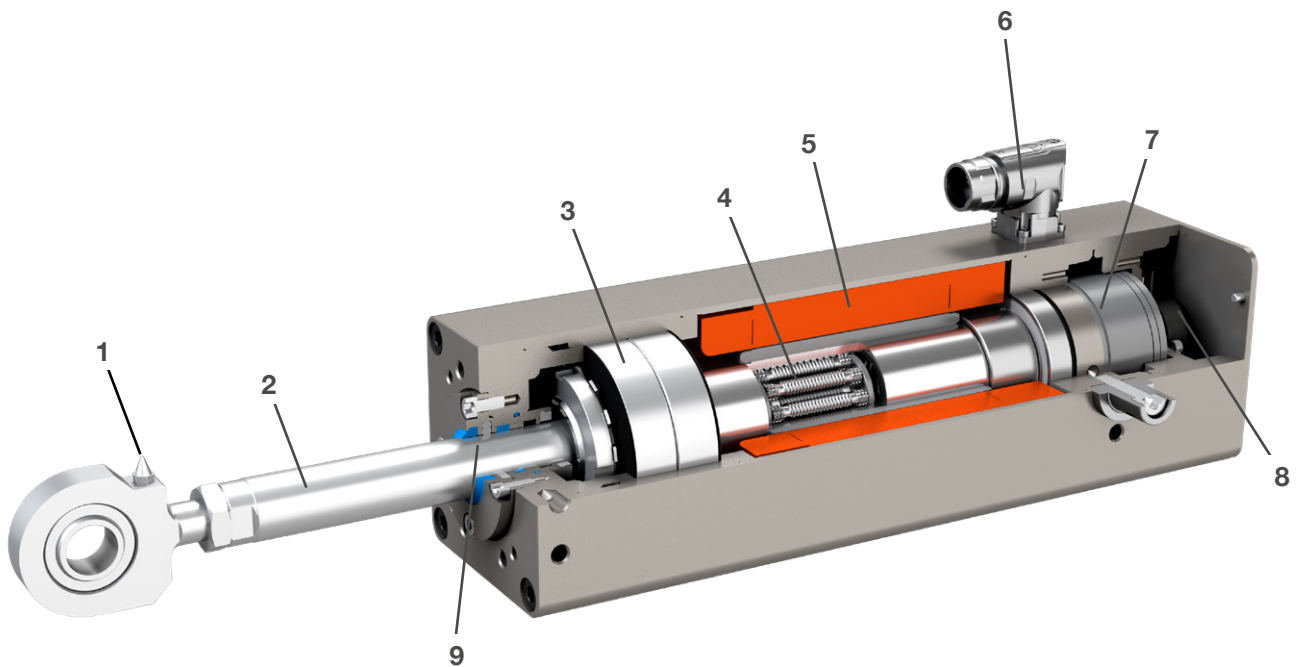
Benefits

- Saves space
- Very high load capabilities compared to actuators with similar dimensions
- Enables for higher acceleration and higher speed of the robot arm
- Reduces energy consumption by 90% compared to pneumatic solutions
- Better quality through greater control of the process
- Faster production cycles
- Low noise

Product description

The CEMC actuators incorporate hollow shaft motor directly around the planetary roller screw technology resulting in a very compact yet powerful solution. Besides dimensions, this design also minimize inertia, thus allowing excellent control, responsive performance, significantly improved cycle-time, and high productivity.

This product range provides high power density in a small package, with approximately 50% shorter length than any typical electromechanical cylinder. They are an ideal solution when compactness and power density are needed to replace fluid powered cylinders. Moreover there is the added advantage of reduced weight, an important feature for robot arms installations.



1. Lubrication fitting
2. Push tube
3. High quality angular contact ball bearings
4. High quality planetary roller screw for highest axial load rating, low axial play and high efficiency
5. Integrated hollow shaft servo motor
6. Motor connectors
7. Fail safe brake option
8. Position feedback options for compatibility with main brands of robots/controllers
9. Scraper seal to keep contamination out

Automotive industry

The automotive industry uses a large quantity of industrial robots with an average of 300 welding robots per production line. The CEMC is the best solution to meet the quality standards, performance requirements and energy savings.

With 20 years of automotive experience, the latest generation CEMC anticipates future market requirements by offering multiple configurations to fit customer needs and to provide the best performances on the field. Upcoming options such as integrated anti-rotation and embedded IoT-ready sensors will further improve equipment performance and productivity.



Critical drivers for new welding assembly line



Greater productivity

High-performance roller screws guarantee continuous use and improve service life while having minimized maintenance (achieving 10 million spots without re-lubrication).



Flexibility and programmability

Compact and modular design offers easy integration into automation equipment and compatibility with various robot brands.



Pneumatic free systems

Mechatronic systems are environmentally friendly and offer greater efficiency in energy reduction.



Maximized power density

Compact and robust technology where high force and reliability are essential, leading to over 20 million spot welds.

Spot welding solutions

X welding gun frame

Function

Electrical actuators actuate both gun arms as a scissor mechanism while keeping welding force.

Requirements

- Actuator force up to 25 kN
- Stroke need of max 180 mm



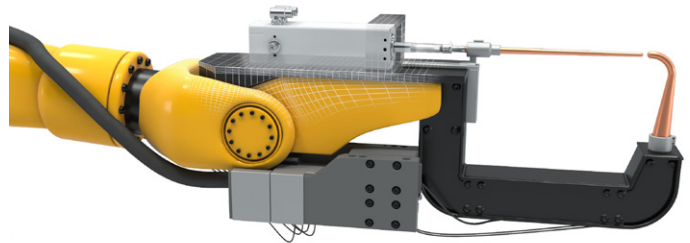
C welding gun frame

Function





Electrical actuators actuate one gun arm, the second remaining static, while keeping welding force.

Requirements

- Actuator force up to 15 kN
- Higher speed vs X gun kinematic
- Stroke need of max 300 mm



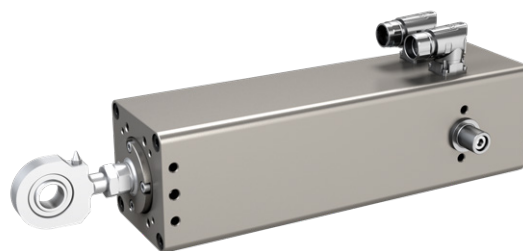
Key benefits for spot welding

	Value	vs previous generation
 Highest number of welding spots	> 20 million spots	+100 %
 Lightweight construction to reduce welding robot power and size	~12 kg	-10 %
 High reliability to minimize downtime	10 million spots without relubrication ¹⁾	+500 %
 Modularity with various feedback options	> 600 possible configurations	Limited options

¹⁾ In relation with force level and working conditions.

CEMC2105

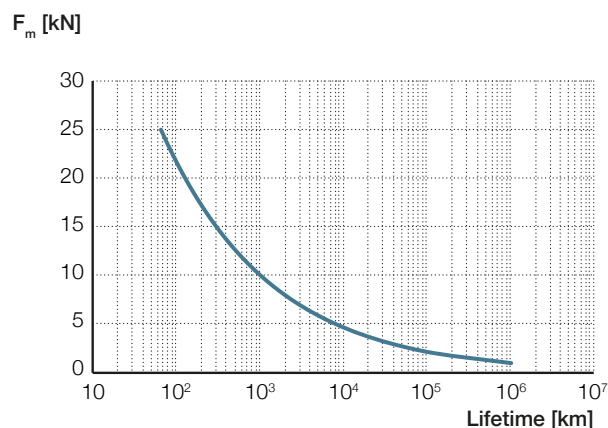
Natural convection cooling



Technical data CEMC2105

Designation	Symbol	Unit	A3N	B3N	A5N	B5N
Performance data						
Continuous force @ zero speed	F_{c0}	kN	6,9	6,8	10,4	10,4
Peak force @ zero speed	F_{p0}	kN	14,0	13,7	25,0	25,0
Dynamic load capacity	C	kN	59	59	59	59
Holding force (motorbrake option)	F_{hold}	kN	15,8	15,8	15,8	15,8
Max linear speed	v_{max}	mm/s	300	300	300	300
Max linear acceleration	a_{max}	m/s ²	7	7	7	7
Duty cycle	D	%	100	100	100	100
Mechanical data						
Screw type	–	–	IRS	IRS	IRS	IRS
Screw diameter	d_{screw}	mm	21	21	21	21
Screw lead	p_{screw}	mm	5	5	5	5
Lead accuracy	–	–	G5	G5	G5	G5
Stroke	s	mm	180	180	180	180
Internal overstroke each side	s_0	mm	1	1	1	1
Backlash	$s_{backlash}$	mm	0,04	0,04	0,04	0,04
Gear reduction	i	–	1	1	1	1
Inertia	J	10 ⁻⁴ kgm ²	8	8	8	8
Inertia of optional brake	J_{brake}	10 ⁻⁴ kgm ²	0,6	0,6	0,6	0,6
Weight	m	kg	11,5	11,5	12,3	12,3
Weight of optional brake	m_{brake}	kg	1,4	1,4	1,4	1,4
Environment						
Ambient temperature	$T_{ambient}$	°C	0...+40	0...+40	0...+40	0...+40
Degree of protection	IP	–	65S	65S	65S	65S

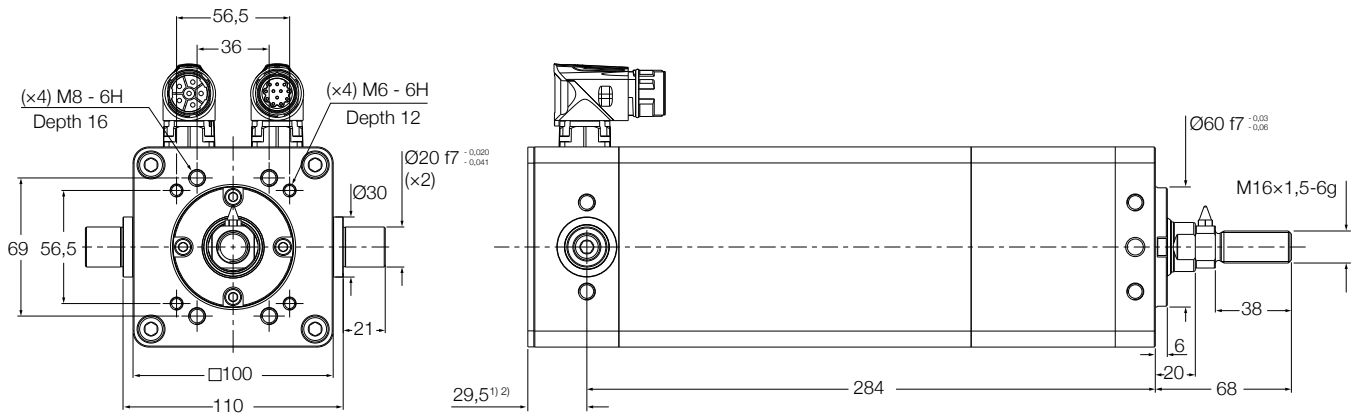
Lifetime diagram



NOTE:

This curve shows standard L_{10} fatigue calculation, with a mean load over a double stroke cycle. For applications like spot welding or servo press, where a peak force is applied over a very short stroke (shorter than twice the pitch of the roller screw), standard L_{10} fatigue calculation is not representative of the reachable life in operation. In these cases, please contact Ewellix for a dedicated service life calculation.

Dimensional drawing



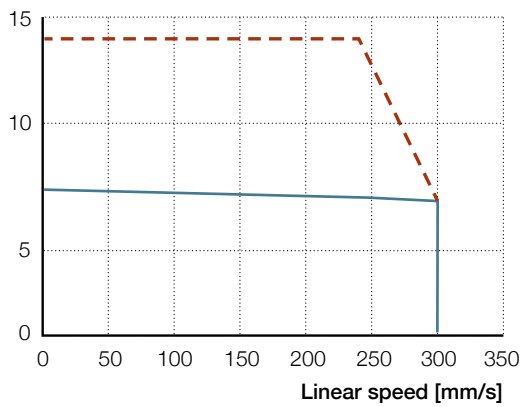
¹⁾ For brake option, add 44 mm

²⁾ Additional length varies depending on the type of feedback device: for R1 and R2 is 29.5 mm as shown, for S1 add 20 mm and for H1 add 39 mm

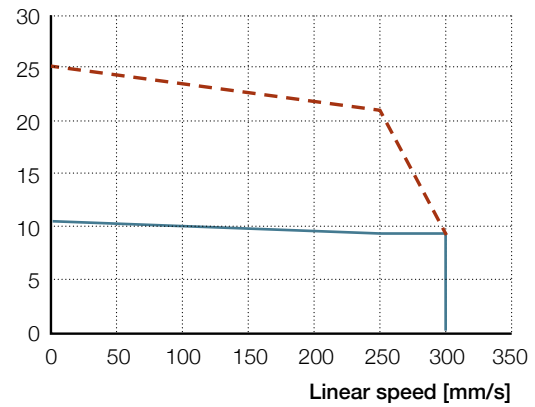
NOTE: For other feedback options, please contact Ewellix.

Performance diagrams

x3N Axial force [kN]



x5N Axial force [kN]

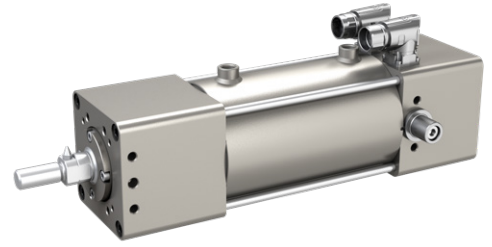


CEMC2105 F_{cont}
F_{peak}

CEMC2105 F_{cont}
F_{peak}

CEMC2105

Water cooling

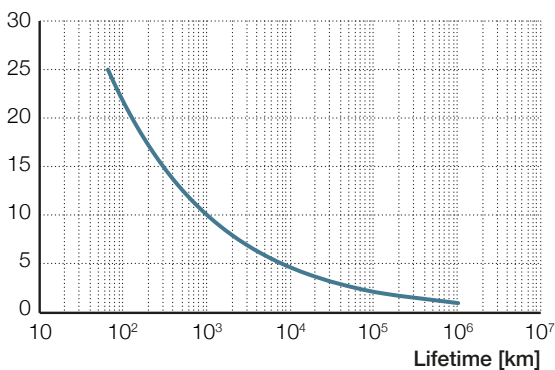


Technical data CEMC2105

Designation	Symbol	Unit	A3W	B3W	A5W	B5W
Performance data						
Continuous force @ zero speed	F_{c0}	kN	10,3	10,3	18,2	18,4
Peak force @ zero speed	F_{p0}	kN	20,1	20,1	25,0	25,0
Dynamic load capacity	C	kN	59	59	59	59
Holding force (motorbrake option)	F_{hold}	kN	15,8	15,8	15,8	15,8
Max linear speed	v_{max}	mm/s	300	300	300	300
Max linear acceleration	a_{max}	m/s ²	7	7	7	7
Duty cycle	D	%	100	100	100	100
Mechanical data						
Screw type	–	–	IRS	IRS	IRS	IRS
Screw diameter	d_{screw}	mm	21	21	21	21
Screw lead	p_{screw}	mm	5	5	5	5
Lead accuracy	–	–	G5	G5	G5	G5
Stroke	s	mm	180	180	180	180
Internal overstroke each side	s_0	mm	1	1	1	1
Backlash	$s_{backlash}$	mm	0,04	0,04	0,04	0,04
Gear reduction	i	–	1	1	1	1
Inertia	J	10 ⁻⁴ kgm ²	8	8	8	8
Inertia of optional brake	J_{brake}	10 ⁻⁴ kgm ²	0,6	0,6	0,6	0,6
Weight	m	kg	13,1	13,1	13,9	13,9
Weight of optional brake	m_{brake}	kg	1,4	1,4	1,4	1,4
Environment						
Ambient temperature	$T_{ambient}$	°C	0...+40	0...+40	0...+40	0...+40
Degree of protection	IP	–	65S	65S	65S	65S

Lifetime diagram

F_m [kN]

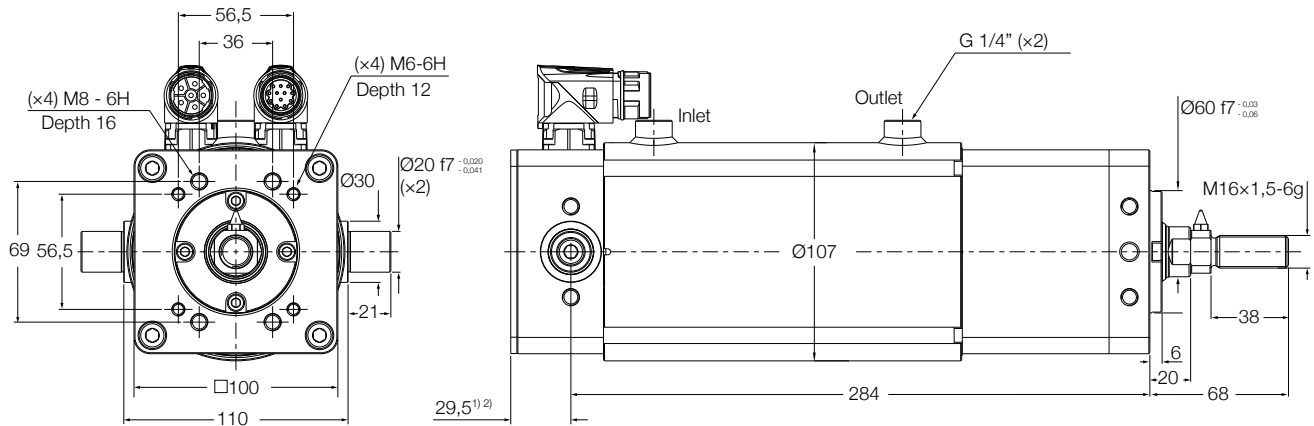


NOTE:

This curve shows standard L_{10} fatigue calculation, with a mean load over a double stroke cycle. For applications like spot welding or servo press, where a peak force is applied over a very short stroke (shorter than twice the pitch of the roller screw), standard L_{10} fatigue calculation is not representative of the reachable life in operation. In these cases, please contact Ewellix for a dedicated service life calculation.

CEMC2105

Dimensional drawing



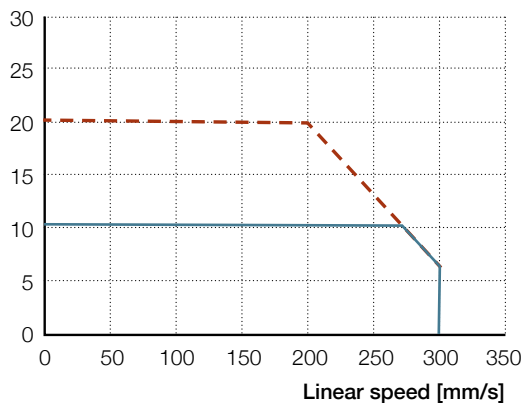
¹⁾ For brake option, add 44 mm

²⁾ Additional length varies depending on the type of feedback device: for R1 and R2 is 29.5 mm as shown, for S1 add 20 mm and for H1 add 39 mm

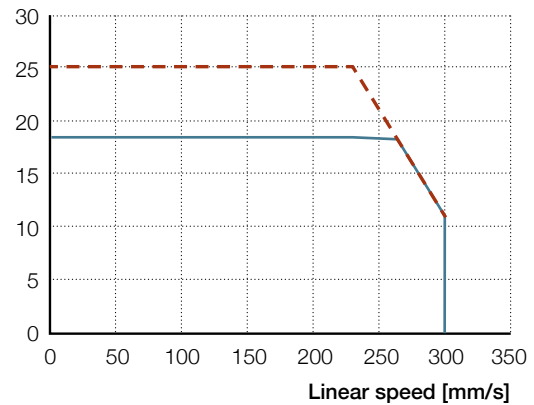
NOTE: For other feedback options, please contact Ewellix.

Performance diagrams

x3W Axial force [kN]



x5W Axial force [kN]

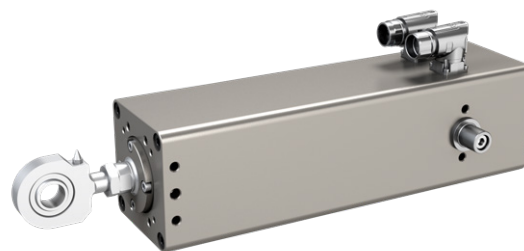


CEMC2105 F_{cont}
F_{peak}

CEMC2105 F_{cont}
F_{peak}

CEMC1808

Natural convection cooling

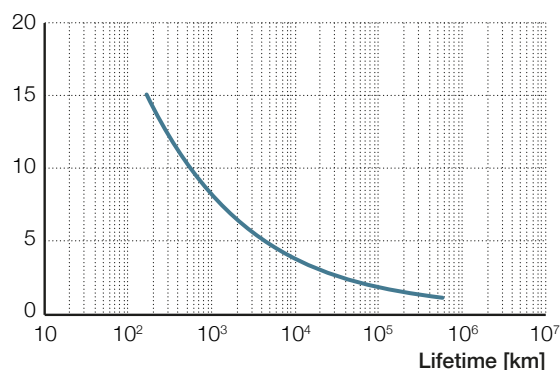


Technical data CEMC1808

Designation	Symbol	Unit	A3N	B3N	A5N	B5N
Performance data						
Continuous force @ zero speed	F_{c0}	kN	4,8	4,7	7,2	7,2
Peak force @ zero speed	F_{p0}	kN	9,7	9,6	15,0	15,0
Dynamic load capacity	C	kN	38	38	38	38
Holding force (motorbrake option)	F_{hold}	kN	9,9	9,9	9,9	9,9
Max linear speed	v_{max}	mm/s	480	480	480	480
Max linear acceleration	a_{max}	m/s ²	11	11	11	11
Duty cycle	D	%	100	100	100	100
Mechanical data						
Screw type	–	–	SRS	SRS	SRS	SRS
Screw diameter	d_{screw}	mm	18	18	18	18
Screw lead	p_{screw}	mm	8	8	8	8
Lead accuracy	–	–	G5	G5	G5	G5
Stroke	s	mm	150 or 300	150 or 300	150 or 300	150 or 300
Internal overstroke each side	s_0	mm	1	1	1	1
Backlash	$s_{backlash}$	mm	0,02	0,02	0,02	0,02
Gear reduction	i	–	1	1	1	1
Inertia	J	10 ⁻⁴ kgm ²	11,5	11,5	11,5	11,5
Inertia of optional brake	J_{brake}	10 ⁻⁴ kgm ²	0,6	0,6	0,6	0,6
Weight	m	kg	13,3	13,3	14,1	14,1
Weight of optional brake	m_{brake}	kg	1,4	1,4	1,4	1,4
Environment						
Ambient temperature	$T_{ambient}$	°C	0...+40	0...+40	0...+40	0...+40
Degree of protection	IP	–	65S	65S	65S	65S

Lifetime diagram

F_m [kN]

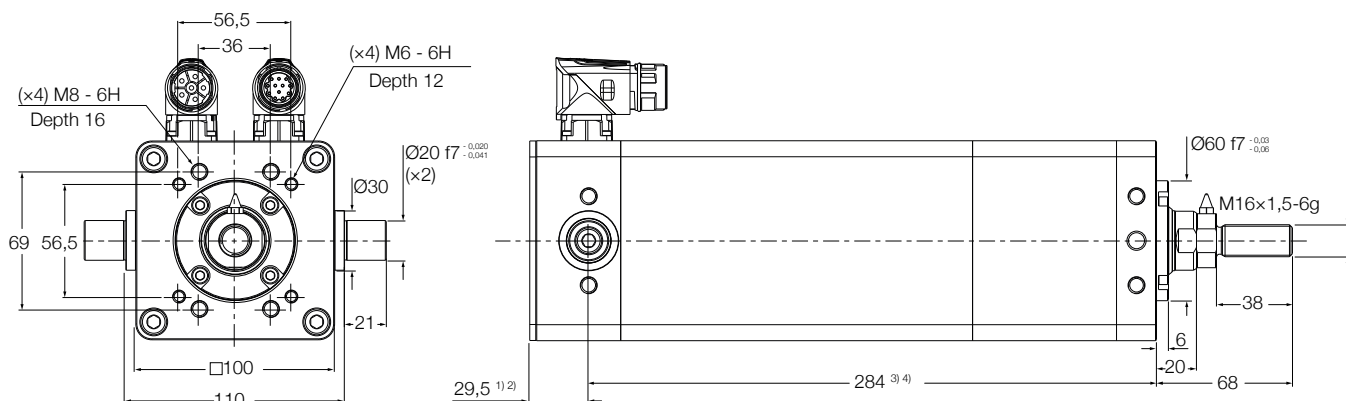


NOTE:

This curve shows standard L_{10} fatigue calculation, with a mean load over a double stroke cycle. For applications like spot welding or servo press, where a peak force is applied over a very short stroke (shorter than twice the pitch of the roller screw), standard L_{10} fatigue calculation is not representative of the reachable life in operation. In these cases, please contact Ewellix for a dedicated service life calculation.

CEMC1808 —

Dimensional drawing



¹⁾ For brake option, add 44 mm

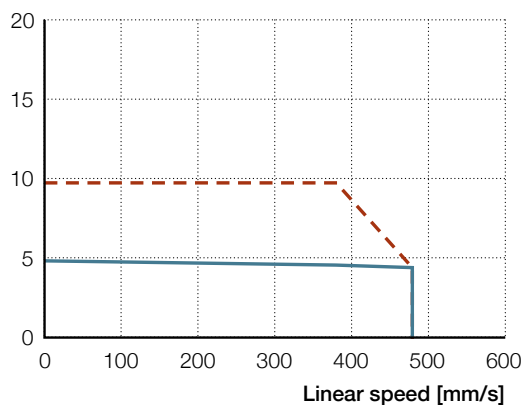
²⁾ Additional length varies depending on the type of feedback device: for R1 and R2 is 29,5 mm as shown, for S1 add 20 mm and for H1 add 39 mm
NOTE: For other feedback options, please contact Ewellix.

³⁾ Length valid for CEMC1808-150. For CEMC1808-300 (300 mm stroke), add 150 mm to get corresponding actuator length.

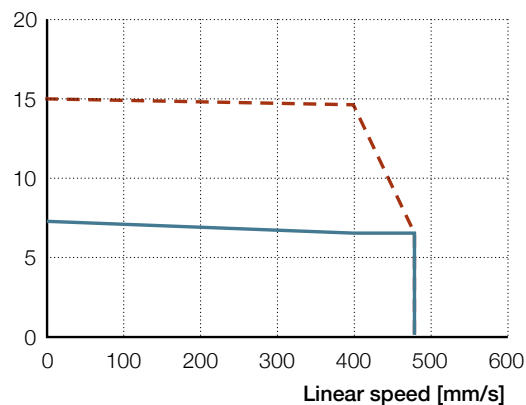
⁴⁾ For anti-rotation option, add 9 mm

Performance diagrams

x3N Axial force [kN]



x5N Axial force [kN]

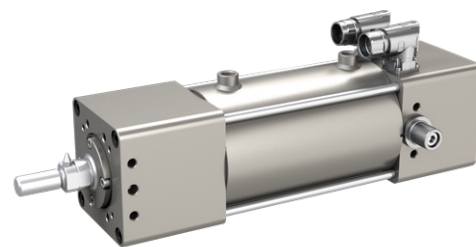


CEMC1808 F_{cont}
 F_{peak}

CEMC1808 F_{cont}
 F_{peak}

CEMC1808

Water cooling

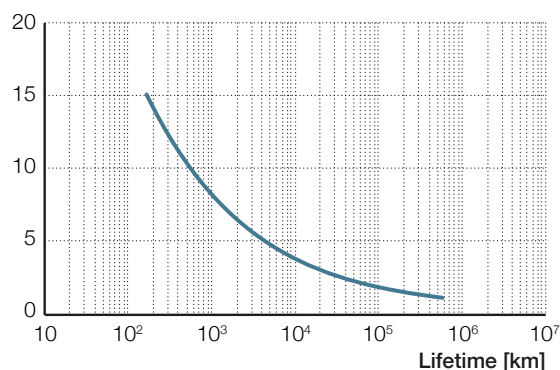


Technical data CEMC1808

Designation	Symbol	Unit	A3W	B3W	A5W	B5W
Performance data						
Continuous force @ zero speed	F_{c0}	kN	7,2	7,2	12,7	12,8
Peak force @ zero speed	F_{p0}	kN	14,0	14,0	15,0	15,0
Dynamic load capacity	C	kN	38	38	38	38
Holding force (motorbrake option)	F_{hold}	kN	9,9	9,9	9,9	9,9
Max linear speed	v_{max}	mm/s	480	480	480	480
Max linear acceleration	a_{max}	m/s ²	11	11	11	11
Duty cycle	D	%	100	100	100	100
Mechanical data						
Screw type	–	–	SRS	SRS	SRS	SRS
Screw diameter	d_{screw}	mm	18	18	18	18
Screw lead	p_{screw}	mm	8	8	8	8
Lead accuracy	–	–	G5	G5	G5	G5
Stroke	s	mm	150 or 300	150 or 300	150 or 300	150 or 300
Internal overstroke each side	s_0	mm	1	1	1	1
Backlash	$s_{backlash}$	mm	0,02	0,02	0,02	0,02
Gear reduction	i	–	1	1	1	1
Inertia	J	10 ⁻⁴ kgm ²	11,5	11,5	11,5	11,5
Inertia of optional brake	J_{brake}	10 ⁻⁴ kgm ²	0,6	0,6	0,6	0,6
Weight	m	kg	14,9	14,9	15,7	15,7
Weight of optional brake	m_{brake}	kg	1,4	1,4	1,4	1,4
Environment						
Ambient temperature	$T_{ambient}$	°C	0...+40	0...+40	0...+40	0...+40
Degree of protection	IP	–	65S	65S	65S	65S

Lifetime diagram

F_m [kN]

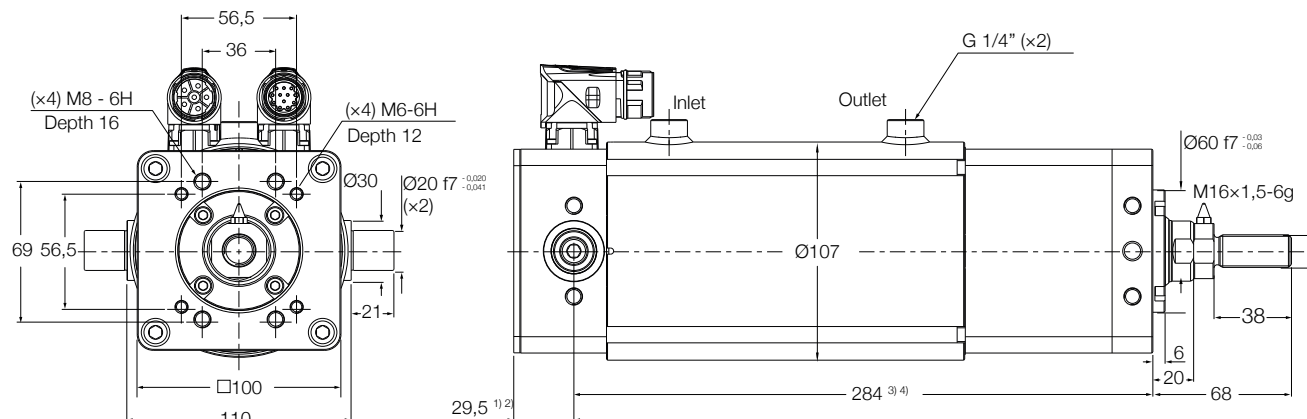


NOTE:

This curve shows standard L_{10} fatigue calculation, with a mean load over a double stroke cycle. For applications like spot welding or servo press, where a peak force is applied over a very short stroke (shorter than twice the pitch of the roller screw), standard L_{10} fatigue calculation is not representative of the reachable life in operation. In these cases, please contact Ewellix for a dedicated service life calculation.

CEMC1808

Dimensional drawing



¹⁾ For brake option, add 44 mm

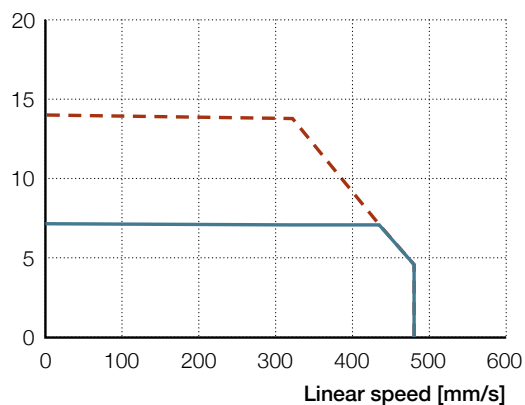
²⁾ Additional length varies depending on the type of feedback device: for R1 and R2 is 29.5 mm as shown, for S1 add 20 mm and for H1 add 39 mm
NOTE: For other feedback options, please contact Ewellix.

³⁾ Length valid for CEMC1808-150. For CEMC1808-300 (300 mm stroke), add 150 mm to get corresponding actuator length.

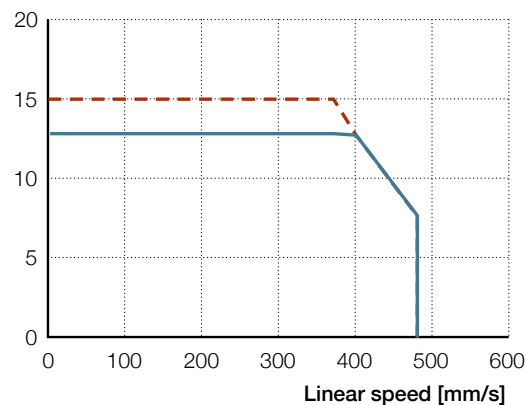
⁴⁾ For anti-rotation option, add 9 mm

Performance diagrams

x3W Axial force [kN]



x5W Axial force [kN]



CEMC1808 F_{cont}
 F_{peak}

CEMC1808 F_{cont}
 F_{peak}

Motors

CEMC series integrates hollow shaft servomotor technology, either with natural convection or water cooling.

The ideal motor technology coupled to premium linear technology to follow automation needs.

Brushless servomotor is the best solution to get high dynamic performances, whilst offering high power density and highest controllability.

Technical data – Natural convection cooling

Designation	Symbol	Unit	A3N	B3N	A5N	B5N
Electrical data						
Motor type	–	–	servo	servo	servo	servo
Drive voltage supply (nominal)	U	V _{AC}	400	230	400	230
DC bus voltage supply (minimum)	U	V _{DC}	540	325	540	325
Nominal speed	n _{nom}	rpm	3600	3430	3485	3600
Max speed	n _{max}	rpm	3600	3600	3600	3600
Nominal torque @ slow speed ^{1) 3)}	T _{c0}	Nm	7,8	7,7	11,8	11,8
Nominal current @ slow speed ^{1) 3)}	I ₀	A _{rms}	5,1	8	7,3	12,5
Peak torque @ slow speed ^{1) 3)}	T _{p0}	Nm	15,9	15,6	28,4	28,4
Peak current @ slow speed ^{1) 3)}	I _{peak}	A _{rms}	11	17	19	32
Nominal power	P	kW	2,7	2,6	3,9	4,0
Torque constant (K _t at 25 °C) ⁴⁾	K _t	Nm/A _{rms}	1,67	1,06	1,76	1,02
Back emf constant at 1 000 rpm (K _e at 25 °C) ²⁾	K _e	V _{rms}	101,0	64,0	106,6	61,7
Winding resistance (at 20 °C) ²⁾	R	Ω	4,33	1,74	2,41	0,81
Winding inductance (at 20 °C) ²⁾	L	mH	14,97	6	10,01	3,35
Pole number	–	–	8	8	8	8
Insulation class	–	–	H	H	H	H
Thermoswitch	–	–	In option	In option	In option	In option
Temperature sensor	–	–	PT1000	PT1000	PT1000	PT1000

¹⁾ Slow speed: < 1 % max actuator speed

²⁾ Phase to phase

³⁾ Values valid for a ΔT of 90 °C

⁴⁾ Tolerance on value: +/-10 %

Technical data – Water cooling

Designation	Symbol	Unit	A3W	B3W	A5W	B5W
Electrical data						
Motor type	–	–	servo	servo	servo	servo
Drive voltage supply (nominal)	U	V _{AC}	400	230	400	230
DC bus voltage supply (minimum)	U	V _{DC}	540	325	540	325
Nominal speed	n _{nom}	rpm	3275	3110	3090	3230
Max speed	n _{max}	rpm	3600	3600	3600	3600
Nominal torque @ slow speed ^{1) 3)}	T _{cd}	Nm	11,7	11,7	20,7	20,9
Nominal current @ slow speed ^{1) 3)}	I ₀	A _{rms}	7,8	12,3	13,2	23,1
Peak torque @ slow speed ^{1) 3)}	T _{p0}	Nm	22,8	22,8	28,4	28,4
Peak current @ slow speed ^{1) 3)}	I _{peak}	A _{rms}	18	28	19	32
Nominal power	P	kW	4,0	3,8	6,6	7,0
Torque constant (K _t at 25 °C) ⁴⁾	K _t	Nm/A _{rms}	1,67	1,06	1,76	1,02
Back emf constant at 1 000 rpm (K _e at 25 °C) ²⁾	K _e	V _{rms}	101,0	64,0	106,6	61,7
Winding resistance (at 20 °C) ²⁾	R	Ω	4,33	1,74	2,41	0,81
Winding inductance (at 20 °C) ²⁾	L	mH	14,97	6	10,01	3,35
Water flow (max pressure 5 bars)	–	l/mn	2	2	2	2
Water temperature	–	°C	20...30	20...30	20...30	20...30
Pole number	–	–	8	8	8	8
Insulation class	–	–	H	H	H	H
Thermoswitch	–	–	In option	In option	In option	In option
Temperature sensor	–	–	PT1000	PT1000	PT1000	PT1000

¹⁾ Slow speed: < 1 % max actuator speed

²⁾ Phase to phase

³⁾ Values valid for a ΔT of 90 °C

⁴⁾ Tolerance on value: +/-10 %

CEMC feedback

CEMC latest series is available with different types of position feedback sensors, to ensure the compatibility with main robot and drive manufacturers.

Feedback range on CEMC

Drive compatibility

Robot or drive manufacturer	Resolver Tamagawa (R1)	Resolver LTN (R2)	Absolute encoder Sick-Stegmann (S1)	Absolute encoder Heidenhain (H1)	Absolute encoder Fanuc (F1)	Absolute encoder Yaskawa (Y1)
Lenze (L1)	L1R1	L1R2	L1S1	L1H1	-	-
Siemens (S1)	S1R1	S1R2	-	S1H1	-	-
Kuka (K1)	K1R1	-	-	-	-	-
Comau (C1)	C1R1	-	-	-	-	-
ABB (A1)	-	A1R2	-	-	-	-
Fanuc (F1)	-	-	-	-	F1F1	-
Yaskawa (Y1)	-	-	-	-	-	Y1Y1
Parker (P1)	P1R1	P1R2	P1S1	P1H1	-	-

NOTE: The table above show hardware drive compatibility with Ewellix CEMC.
For other drive manufacturer not list above, please contact Ewellix.

Feedback list and references

R1	Standard resolver from Tamagawa - Size 15, two pole resolver
R2	Standard resolver from LTN - Size 15, two pole resolver
S1	Multi turn absolute encoder from Sick Stegmann - SKM36 reference, 128 signe/cosine periods per revolution, with Hiperface® protocol interface
H1	Multi turn absolute encoder from Heidenhain - EQN1325 reference, 2048 pulses per turn, with EnDat2.2/01 protocol interface
F1	Multi turn encoder from Fanuc - Alpha iAR128 reference
Y1	Multi turn encoder from Yaskawa

NOTE: for any additional information, please refer to feedback device manufacturer datasheet.

Brake option, technical specification

Permanent magnet brake technology	-	-
Nominal power (at 20°C)	W	18
Standard supply	VDC	24 (-10%/+6%)
Optional supply	VDC	90 (-10%/+6%)
Holding torque (at 20°C)	Nm	9
Holding torque (at 100°C)	Nm	8
Brake engage/disengage time (typical) ¹⁾	ms	7/40

¹⁾ The stated switching times are achieved with nominal air gap.
These are average, whose dispersion depends on the power supply and coil temperature.

CEMC connectors definition

Standard power connector, valid for all type of resolver, and S1-H1 encoder



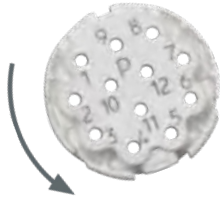
Intercontec BEDC 106 NN 00 00 1216 000

Standard feedback	R1-R2-S1-H1
M23 connector 6 pins	Data/signal
1	U
2	V
3	PE
4	Brake +
5	Brake -
6	W
Housing	Shield

■ Optional

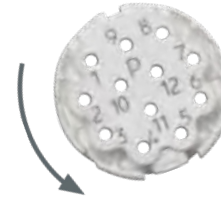
NOTE: For more information, please visit the site: www.intercontec.biz/en.html

Standard feedback connector valid for resolvers, S1 and H1 encoders



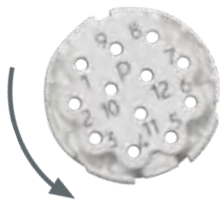
Intercontec AEDC138 NN 00 00 1215 000 (insert at 20°)

Standard feedback	R1
M23 connector 12 pins	Data/signal
1	Sin (S2)
2	Sin (S4)
3	-
4	-
5	-
6	-
7	Err + (R1)
8	PT1000
9	PT1000
10	Err - (R2)
11	Cos (S1)
12	Cos (S3)
Housing	Shield



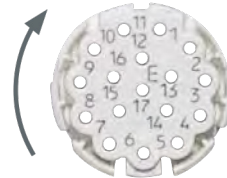
Intercontec AEDC138 NN 00 00 1215 000 (insert at 20°)

Feedback option	R2
M23 connector 12 pins	Data/signal
1	Sin (S2)
2	Sin (S4)
3	-
4	-
5	-
6	-
7	Err + (R1)
8	PT1000
9	PT1000
10	Err - (R2)
11	Cos (S3)
12	Cos (S1)
Housing	Shield



Intercontec AEDC138 NN 00 00 1215 000 (insert at 20°)

Feedback option	S1
M23 connector 12 pins	Data/signal
1	Sin +
2	Sin -
3	V _{cc} (+8V)
4	GND (V _{cc})
5	-
6	-
7	Datafbk +
8	PT1000
9	PT1000
10	Datafbk -
11	Cos +
12	Cos -
Housing	Shield



Intercontec AEDC139 NN 00 00 1215 000 (insert at 0°)

Feedback option	H1
M23 connector 17 pins	Data/signal
1	A +
2	A -
3	Data
4	-
5	Clock
6	-
7	0V
8	PT1000
9	PT1000
10	Up
11	B +
12	B -
13	Data
14	Clock
15	Sensor 0V
16	Sensor Up
17	-
Housing	Shield

NOTE:
 For F1 (Fanuc encoder) and Y1 (Yaskawa) please contact Ewellix for more information.
 For more information, please visit the site: www.intercontec.biz/en.html

Drive options

The performance attributes shown in the tables on the previous pages are the result of a specific Lenze servodrive combinations with the CEMC and integrated Ewellix motor.

The CEMC can be offered with or without the servodrive. The servodrive can be in the recommended configuration or any other configuration that fits your installation with various fieldbus communication for instance (↳ **table 1**).

Standard motors used by Ewellix is powered with 3 × 400VAC drive voltage supply. In consequence standard configurations with Lenze servodrive are with Axx motor type and winding.

Please refer to the ordering key (↳ **page 22 and 23**).

Table 1

Motor reference	Lenze drive ref.
A3N	E94ASHE0074
A5N	E94ASHE0134
A3W	E94ASHE0134
A5W	E94ASHE0174

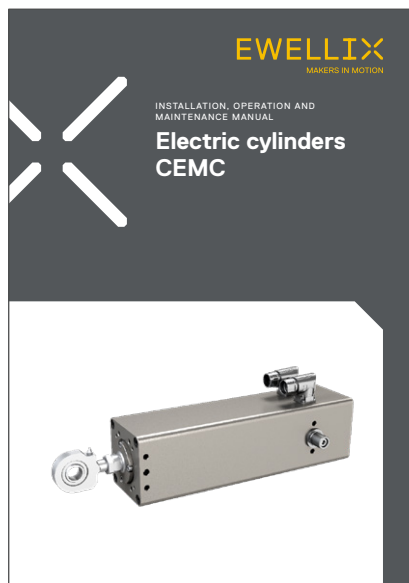
NOTE: Please refer to Lenze documentation for more information. <http://www.lenze.com/en-us/products/inverters>

Manuals

Supporting documents are available for downloading on ewellix.com

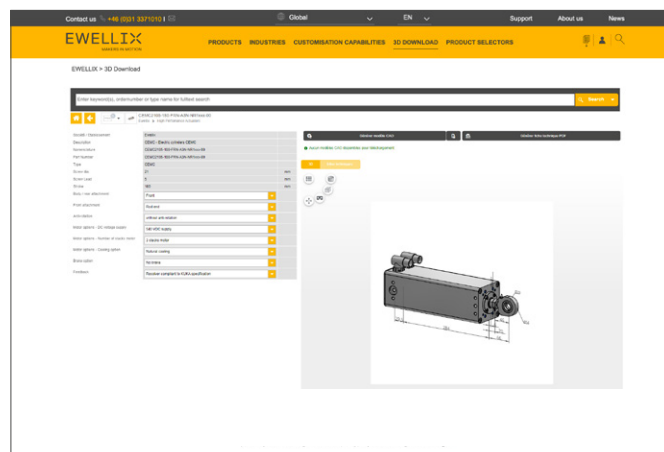
3D models

Product configurators for 3D models download are available on ewellix.com



Operating manual

[Click to download](#)



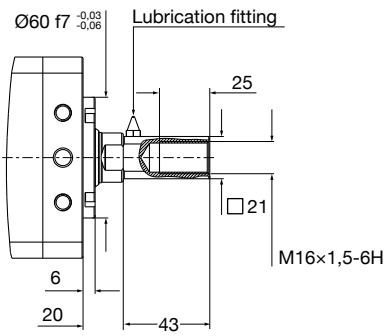
3D model configurator



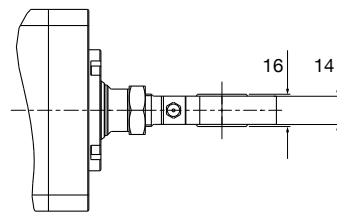
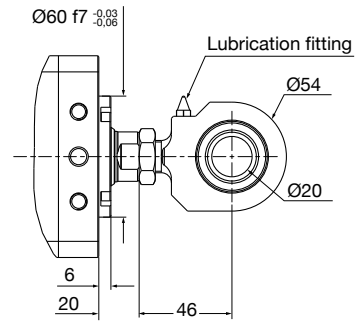
[Click to open](#)

Optional front and rear attachment drawings - CEMC2105

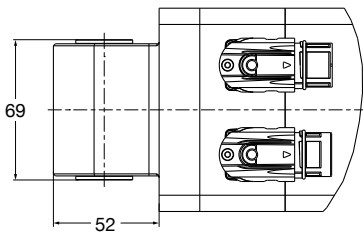
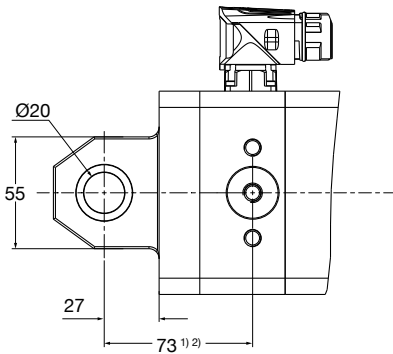
Female thread



Rod end



Back clevis

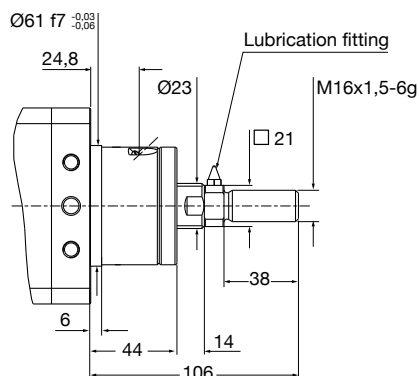
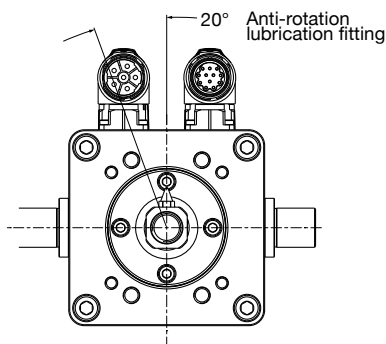


¹⁾ For brake option, add 44 mm

²⁾ Additional length varies depending on the type of feedback device: for R1, R2 and S1 is 73 mm as shown, and for H1 add 30 mm

NOTE: For other feedback options, please contact Ewellix.

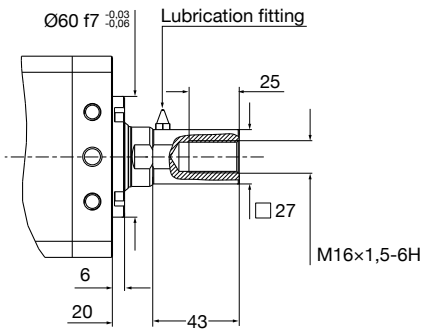
Optional anti-rotation drawing



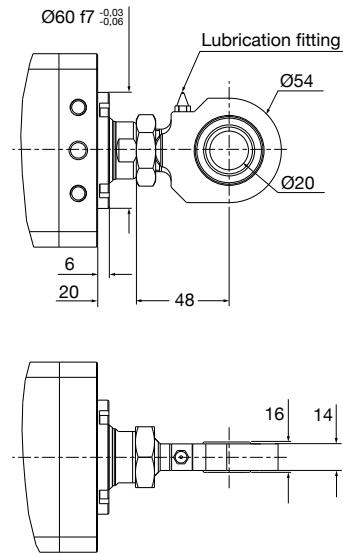
NOTE: With anti-rotation option, please consider an added weight of 0,7 kg to the linear unit.

Optional front and rear attachment drawings - CEMC1808

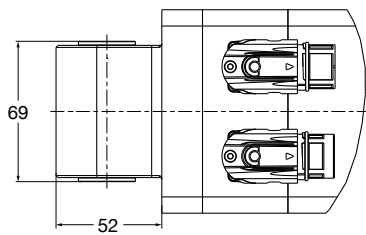
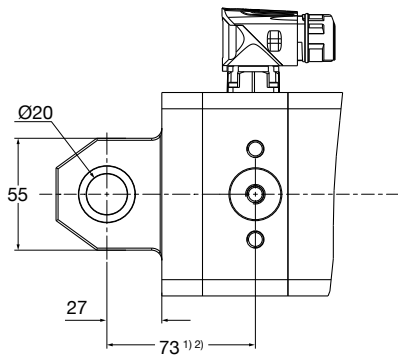
Female thread



Rod end



Back clevis

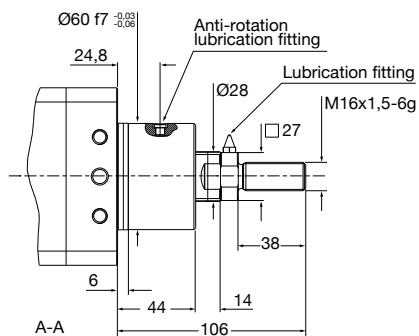
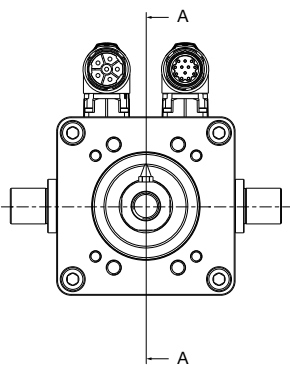


¹⁾ For brake option, add 44 mm

²⁾ Additional length varies depending on the type of feedback device: for R1, R2 and S1 is 73 mm as shown, and for H1 add 30 mm

NOTE: For other feedback options, please contact Ewellix.

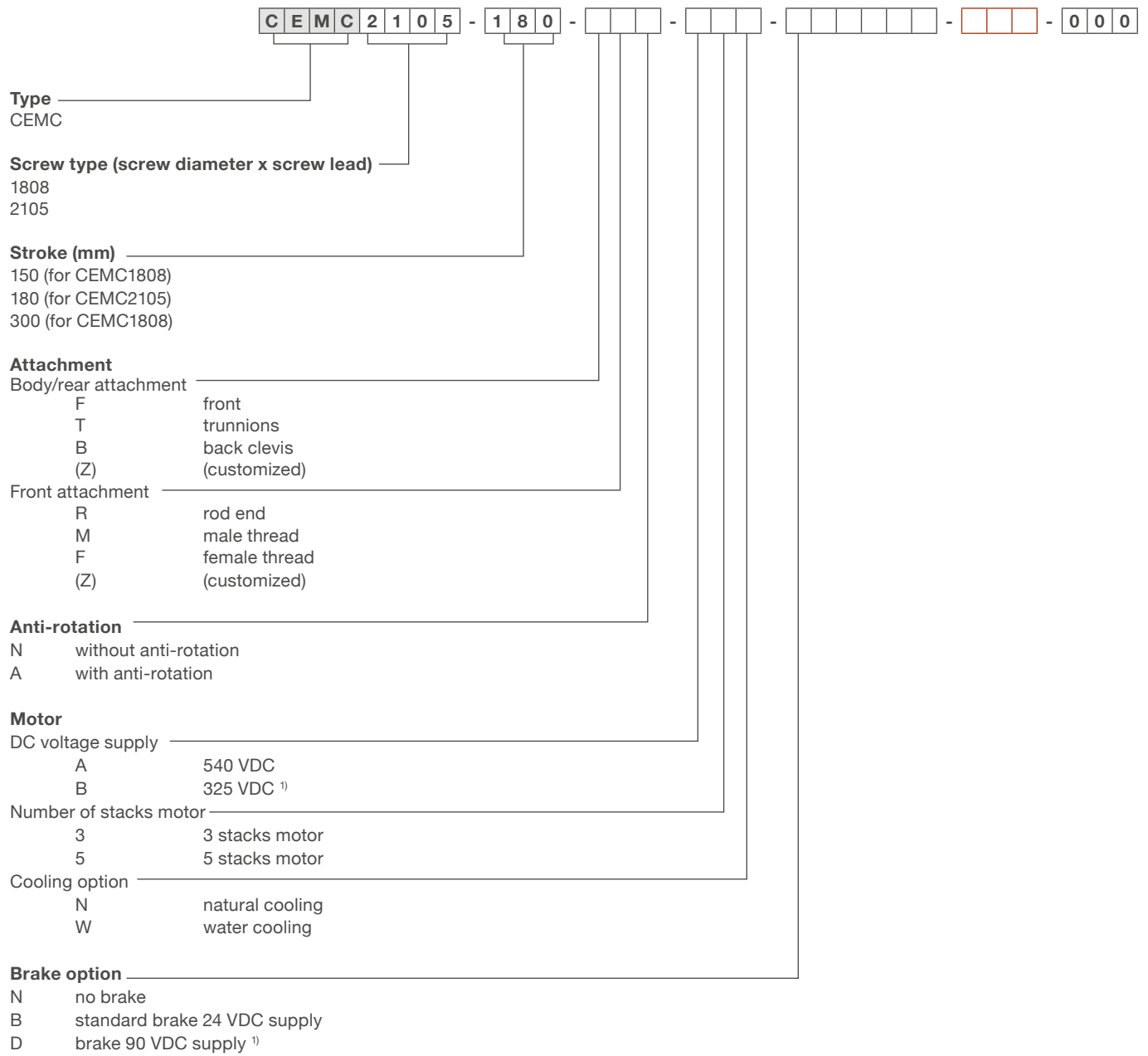
Optional anti-rotation drawing



NOTE: With anti-rotation option, please consider an added weight of 1,1 kg to the linear unit.

Ordering key

Linear units



¹⁾ Available on request. Please contact Ewellix.



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