

Linear actuator

CAT 33

Benefits

- Small
- Robust
- Highly efficient
- Lubricated for service life
- Digital encoder feedback



Suitable control units and accessories

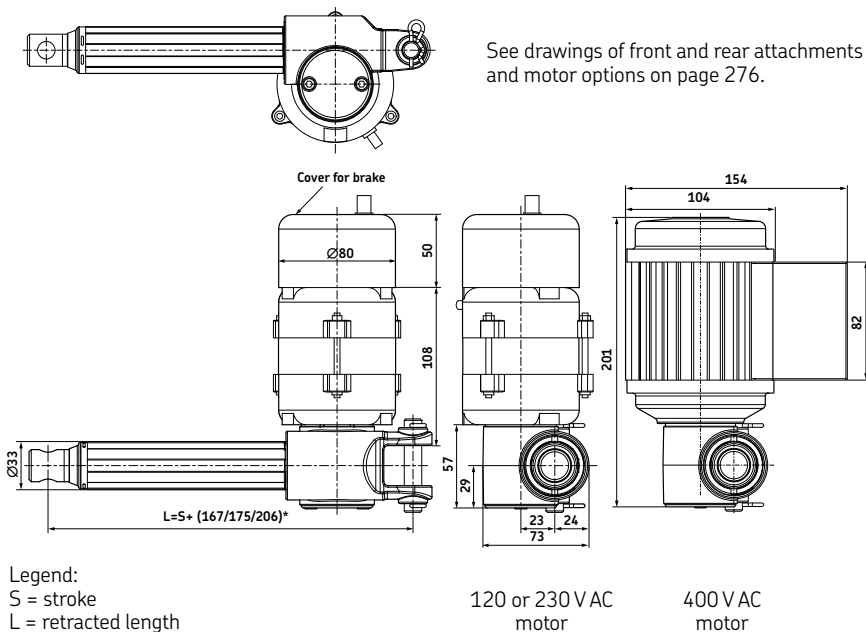
	Control unit	Limit switch	Encoder
	CAEV 110/220	CAXC 33 ¹⁾	E2 ²⁾
E110C	•	•	•
E110CB	•	•	•
E220C	•	•	•
E220CB	•	•	•
E380C	•	•	•
CAES 31C	•		

- Hand switch
- Foot switch
- Desk switch

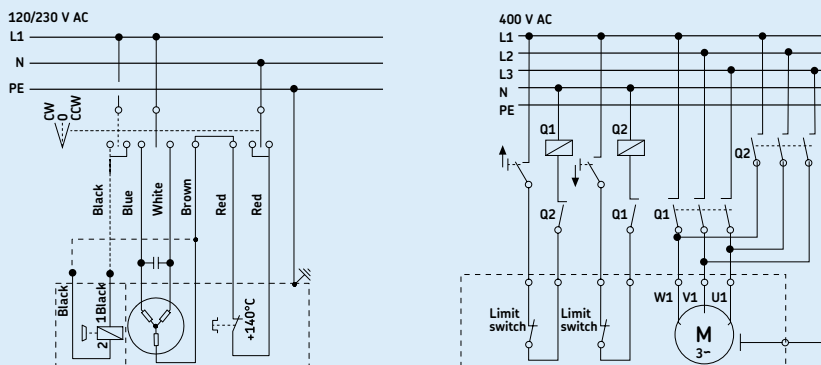
¹⁾See page 378

²⁾See page 380

Dimensional drawing – AC version



Connecting diagrams – AC version



Technical data

	Unit	CAT 33 – AC version
Rated push load	N	800 to 3 000
Rated pull load	N	800 to 3 000
Speed (at full load)	mm/s	5 to 24 ¹⁾
Stroke	mm	100 to 400
Retracted length	mm	S+150/158/189 ²⁾
Voltage	V AC	120, 230 or 400
Power consumption	W	98 (brake 133,2W)
	W	92 (brake 117,3W)
	W	80
Current consumption	A	0,82 (brake +0,29A)
	A	0,4 (brake + 0,11A)
	A	0,2
Duty cycle	%	30
Ambient temperature	°C	-20 to +50
Type of protection	IP	20/54/55
Weight	kg	2 to 2,7

¹⁾ Depending on selected motor

²⁾ Dimension depends on selected front attachment

Suitable control units and accessories

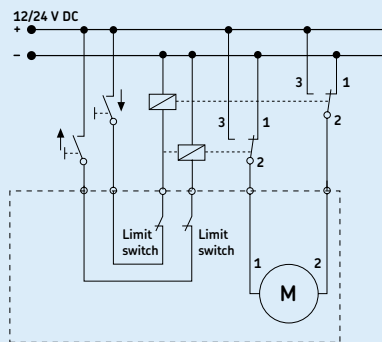
	Control units	Encoder	Limit switch
	CAED 5-24R	E2 ¹⁾	CAXC ²⁾
	CAED 9-24R		
C12C		•	•
D12C		•	•
C24C	•	•	•
C24CW	•	•	•
D24C	•	•	•
D24CB		•	•
D24CS	•	•	•
D24CW	•	•	•
CAES 31C	•	•	•

- Hand switch
 Foot switch
 Desk switch

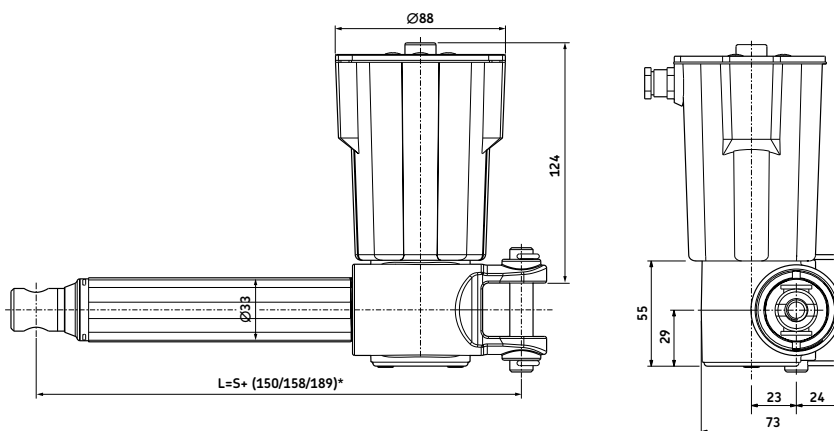
¹⁾ See page 380

²⁾ See page 378

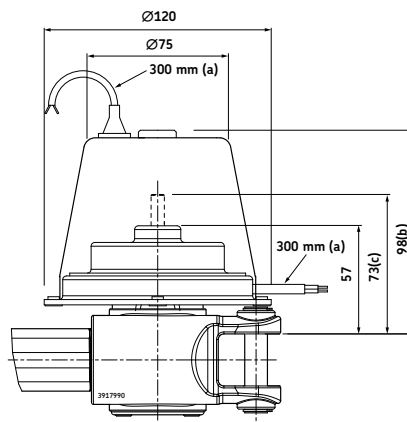
Connecting diagram – DC version



Dimensional drawing – DC version



* Dimension depends on selected front attachment



Legend:

S = stroke

L = retracted length

(a) = cable length

(b) = cover for brake (D24CB)

(c) = extended shaft (D24CS)

D12C, D24C, D24CB, D24CS, D24CW

See drawings of front and rear attachments and motor options on page 276.

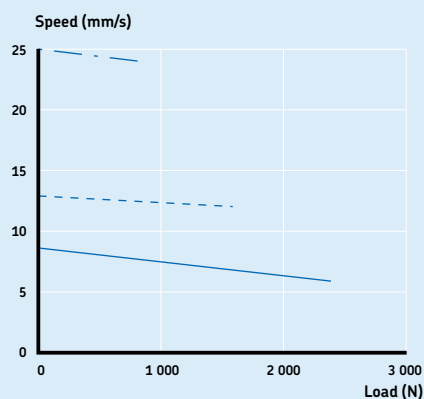
Technical data

	Unit	CAT 33 – DC version
Rated push load	N	800 to 3 000
Rated pull load	N	800 to 3 000
Speed (full load to no load)	mm/s	5 to 52 ¹⁾
Stroke	mm	100 to 400
Retracted length	mm	S+150/158/189 ²⁾
Voltage	V DC	12 or 24
Power consumption	W	N/A
Current consumption	A	18
	A	9
	A	5 (for motors C24CW and D24CW)
Duty cycle	%	15
Ambient temperature	°C	-20 to +50
Type of protection	IP	20/44/65
Weight	kg	2 to 2,7

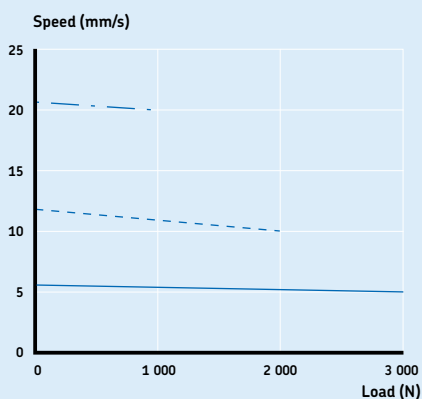
¹⁾ Depending on selected motor

²⁾ Dimension depends on selected front attachment

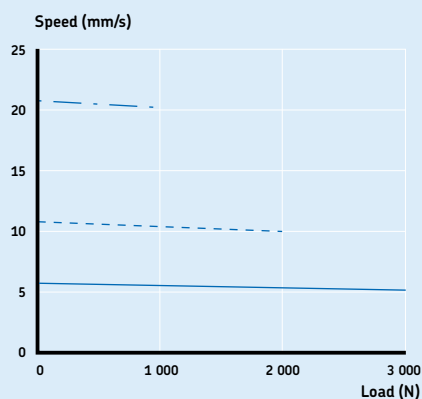
Performance diagrams – AC version



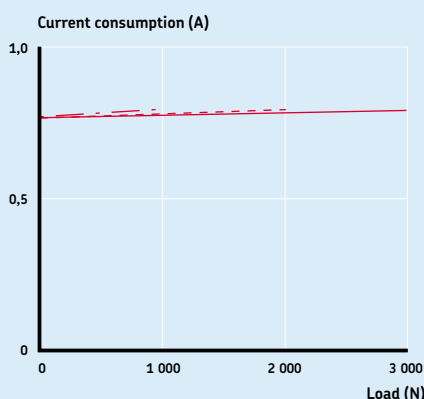
Speed-load diagram CAT 33 ... 120 V AC



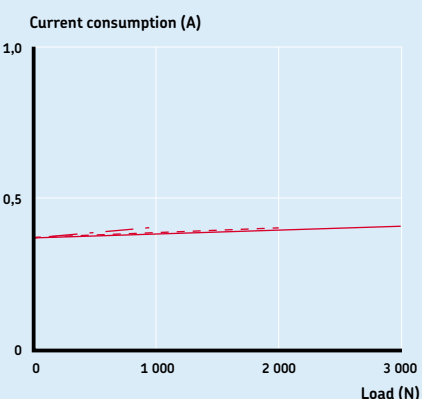
Speed-load diagram CAT 33 ... 230 V AC



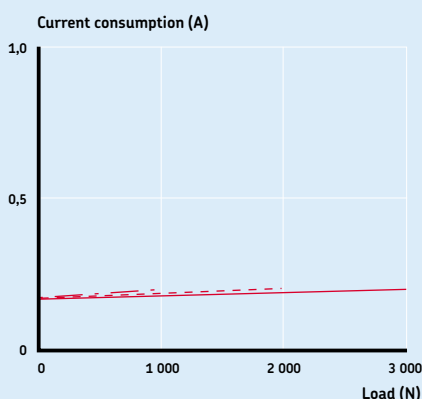
Speed-load diagram CAT 33 ... 400 V AC



Current-load diagram CAT 33 ... 120 V AC



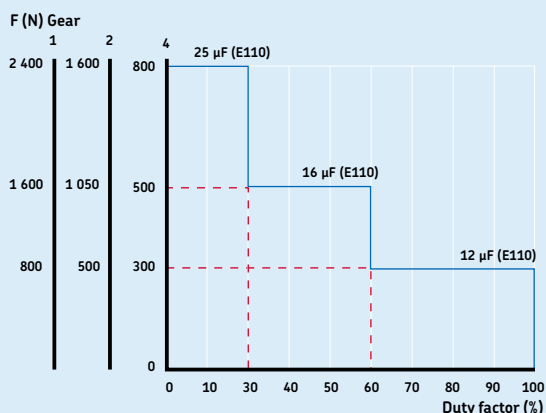
Current-load diagram CAT 33 ... 230 V AC



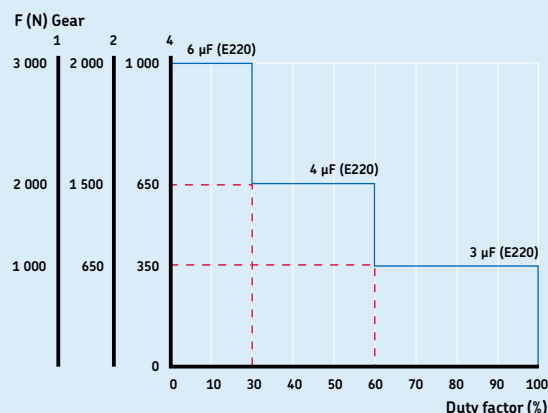
Current-load diagram CAT 33 ... 400 V AC

Gear 1 — V (mm/s)
 — I (A)
 Gear 2 - - - V (mm/s)
 - - - I (A)
 Gear 4 ··· V (mm/s)
 ··· I (A)

Duty cycle

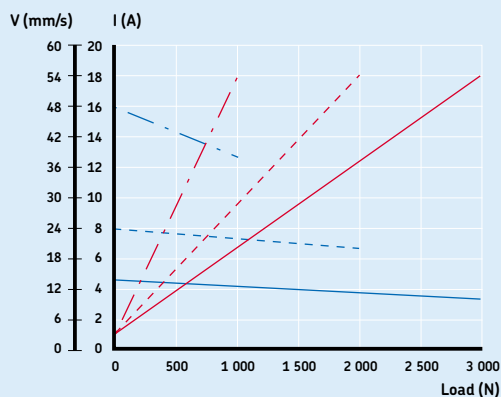


CAT 33 ... 120 V AC

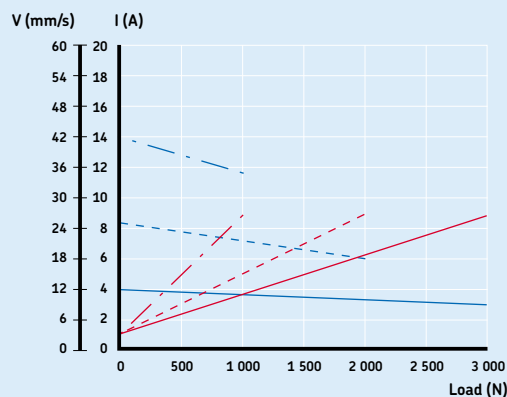


CAT 33 ... 230 V AC

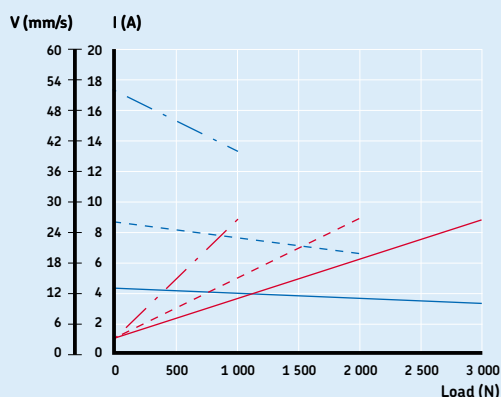
Performance diagrams – DC version



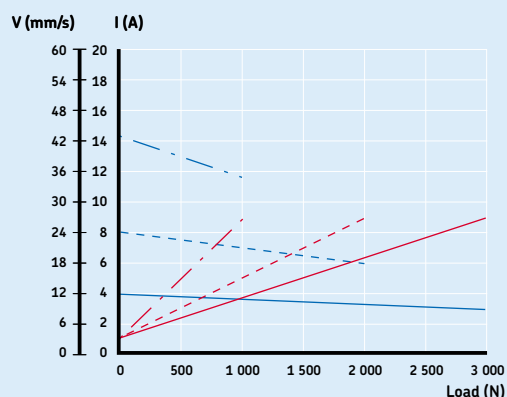
CAT 33.../C12C



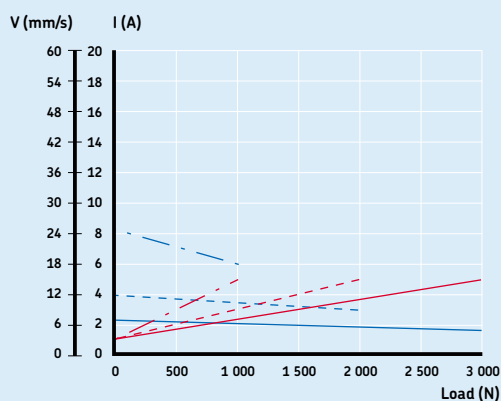
CAT 33.../D12C



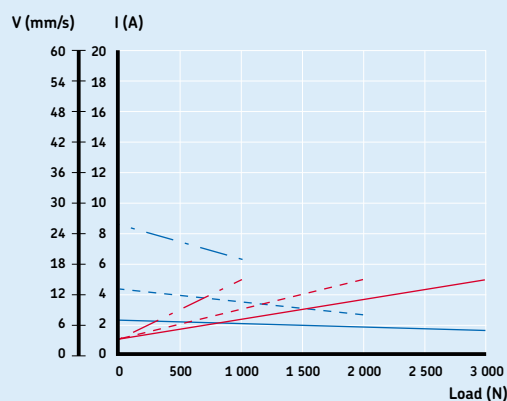
CAT 33.../C24C



CAT 33.../D24C/D24CB/D24CS

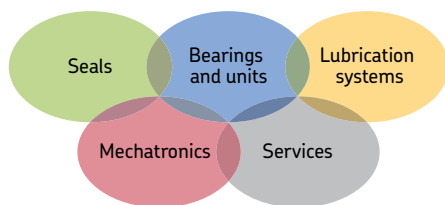


CAT 33.../C24CW



CAT 33.../D24CW

Gear 1 — V (mm/s)
— I (A)
Gear 2 - - - V (mm/s)
- - - I (A)
Gear 4 - - - V (mm/s)
- - - I (A)



The Power of Knowledge Engineering

Drawing on five areas of competence and application-specific expertise amassed over more than 100 years, SKF brings innovative solutions to OEMs and production facilities in every major industry world-wide. These five competence areas include bearings and units, seals, lubrication systems, mechatronics (combining mechanics and electronics into intelligent systems), and a wide range of services, from 3-D computer modelling to advanced condition monitoring and reliability and asset management systems. A global presence provides SKF customers uniform quality standards and worldwide product availability.

Ordering key

Dynamic load (N) / Speed (mm/s)			Motor options	
3 000/xx	2 000/xx	1 000/xx	No motor	0000
2 400/6	1 600/12	800/24	120 V AC/60 Hz, 1-phase, IP54	E110C
2 400/6	1 600/12	800/24	120 V AC/60 Hz, 1-phase, brake, IP20	E110CB
3 000/5	2 000/10	1 000/20	230 V AC/50 Hz, 1-phase, IP54	E220C
3 000/5	2 000/10	1 000/20	230 V AC/50 Hz, 1-phase, brake, IP20	E220CB
3 000/5	2 000/10	1 000/20	400 V AC/50 Hz, 3-phase, IP55	E380C
3 000/xx	2 000/xx	1 000/xx	No motor	0000
3 000/13-10	2 000/24-20	1 000/48-38	12 V DC, IP44 (65)	C12C
2 400/11-7	1 600/21-15	800/39-21	12 V DC, flat motor, IP44	D12C
3 000/13-10	2 000/26-20	1 000/52-40	24 V DC, IP44 (65)	C24C
3 000/7-5	2 000/13-9	1 000/25-18	24 V DC, low speed, IP44 (65)	C24CW
3 000/12-9	2 000/25-18	1 000/43-35	24 V DC, flat motor, IP44	D24C
3 000/12-9	2 000/25-18	1 000/43-35	24 V DC, flat motor, brake, IP20	D24CB
3 000/12-9	2 000/25-18	1 000/43-35	24 V DC, flat motor, IP44, ext. shaft	D24CS
3 000/7-5	2 000/13-8	1 000/26-19	24 V DC, flat motor, low speed, IP44	D24CW
1	2	4		

C A T [] 3 3 X [] X [] [] [] [] [] [] / [] [] [] [] [] [] [] []

Type

Motor assembly:

Right
Left

R
L

Stroke (S):

100 mm
200 mm
300 mm
400 mm
Other stroke lengths

100
200
300
400

Rear attachment (see page 276):

Fork ear, Ø=12,0 mm
Fork ear, Ø=12,7 mm
Single ear, Ø=12,0 mm
Single ear, Ø=12,7 mm

A1
A2
K1
K2

Front attachment (see page 276):

Hole, Ø=12,0 mm
Hole, Ø=12,7 mm
Male thread, M12
Female thread, M12
Fork ear, Ø=10,1 mm

G1
G2
G3
G4
G5

Feedback:

No encoder (no code)
Encoder (for all standard motors)

E2

Option:

Friction clutch (not available with option encoder)
No friction clutch

F
Z

Options shown in italics are only available on demand. Contact SKF for more information on minimum quantities and additional costs.

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