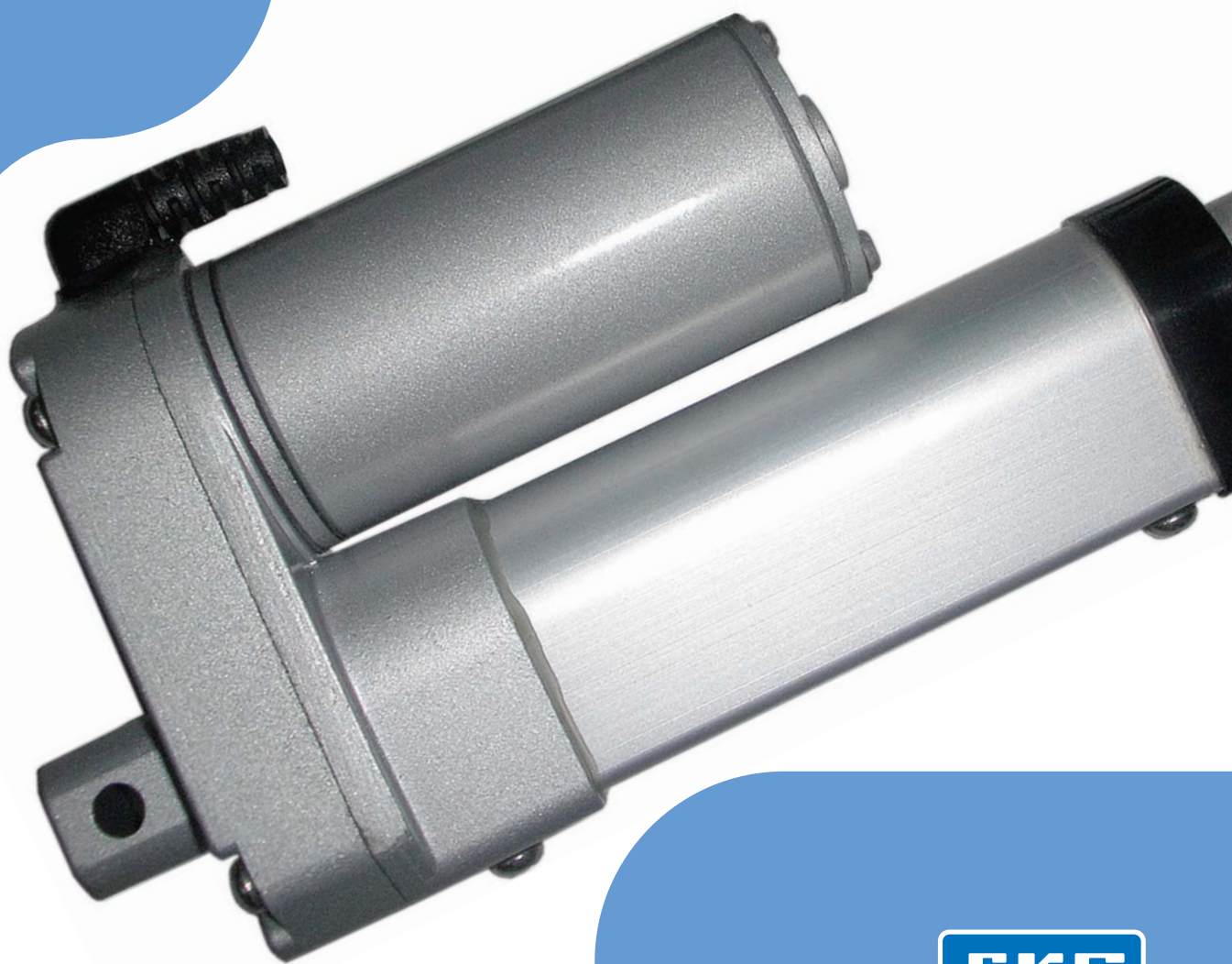


Linear actuators

Jaeger range





The SKF® brand now stands for more than ever before, and means more to you as a valued customer.

While SKF maintains its leadership as the hallmark of quality bearings throughout the world, new dimensions in technical advances, product support and services have evolved SKF into a truly solutions-oriented supplier, creating greater value for customers.

These solutions encompass ways to bring greater productivity to customers, not only with breakthrough application-specific products, but also through leading-edge design simulation tools and consultancy services, plant asset efficiency maintenance programmes, and the industry's most advanced supply management techniques.

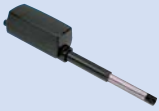
The SKF brand still stands for the very best in rolling bearings, but it now stands for much more.

SKF – the knowledge engineering company

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Selection guide

Linear actuators	Type (series)	Max. force		Max. speed		Stroke (S) standard	Features	Page
		push	pull	no load	full load			No.
		N	N	mm/s	mm/s	mm		
	MD4-A1	3 000	0	6,7	3,7	100-400	EN 60601-1	8
	MD4-A2	2 000	0	13	6,4	100-400	EN 60601-1	8
	MD4-A3	1 200	0	25	13,4	100-400	EN 60601-1	8
	MD4-A4	1 000	0	32	20	100-400	EN 60601-1	8
	MD4-A5	3 000	0	8,5	5,0	100-400	EN 60601-1	8
	MD4-A6	3 000	0	5,0	3,0	100-400	EN 60601-1	8
	FD-A1	6 000	4 000	4,2	2,6	50-300	Silent operation	10
	FD-A2	3 000	2 000	8,2	6,2	50-300	Silent operation	10
	LD4-A1	3 000	0	6,7	3,7	100-400	Silent operation	12
	LD4-A2	2 000	0	13	6,4	100-400	Silent operation	12
	LD4-A3	1 200	0	25	13,4	100-400	Silent operation	12
	LD4-A4	1 000	0	32	20	100-400	Silent operation	12
	LD4-A5	3 000	0	8,5	5,0	100-400	Silent operation	12
	LD4-A6	3 000	0	5,0	3,0	100-400	Silent operation	12
	LD6-A1	4 000	0	7	5	100-400	Universal use	14
	LD6-A2	2 000	0	13	11	100-400	Universal use	14
	M24V-S	800	800	10,5	7,0	100-300	Compact	16
	M24V-D	500	500	20	15	100-300	Compact	16
	IMD3-05	120	120	57	45	50-300	Silent operation	18
	IMD3-10	240	240	30	24	50-300	Silent operation	18
	IMD3-20	500	500	17	13	50-300	Silent operation	18
	IMD3-30	750	750	10	9	50-300	Silent operation	18
	IMD3-40	1 000	1 000	8	6	50-300	Silent operation	18
	ID8A-10	1 500	1 500	38	25	100-600	Robust	20
	ID8A-20	2 500	2 500	20	13	100-600	Robust	20
	ID8B-05	2 300	2 300	65	45	100-600	Robust	22
	ID8B-10	3 500	3 500	36	22	100-600	Robust	22
	ID8B-20	4 500	4 500	22	13	100-600	Robust	22
	IA4A-10	1 500	1 500	29	25	100-600	Robust	24
	IA4A-20	2 300	2 300	16	14	100-600	Robust	24
	IA4B-05	2 300	2 300	57	46	100-600	Robust	26
	IA4B-10	4 500	4 500	29	25	100-600	Robust	26
	IA4B-20	6 000	6 000	15	12	100-600	Robust	26

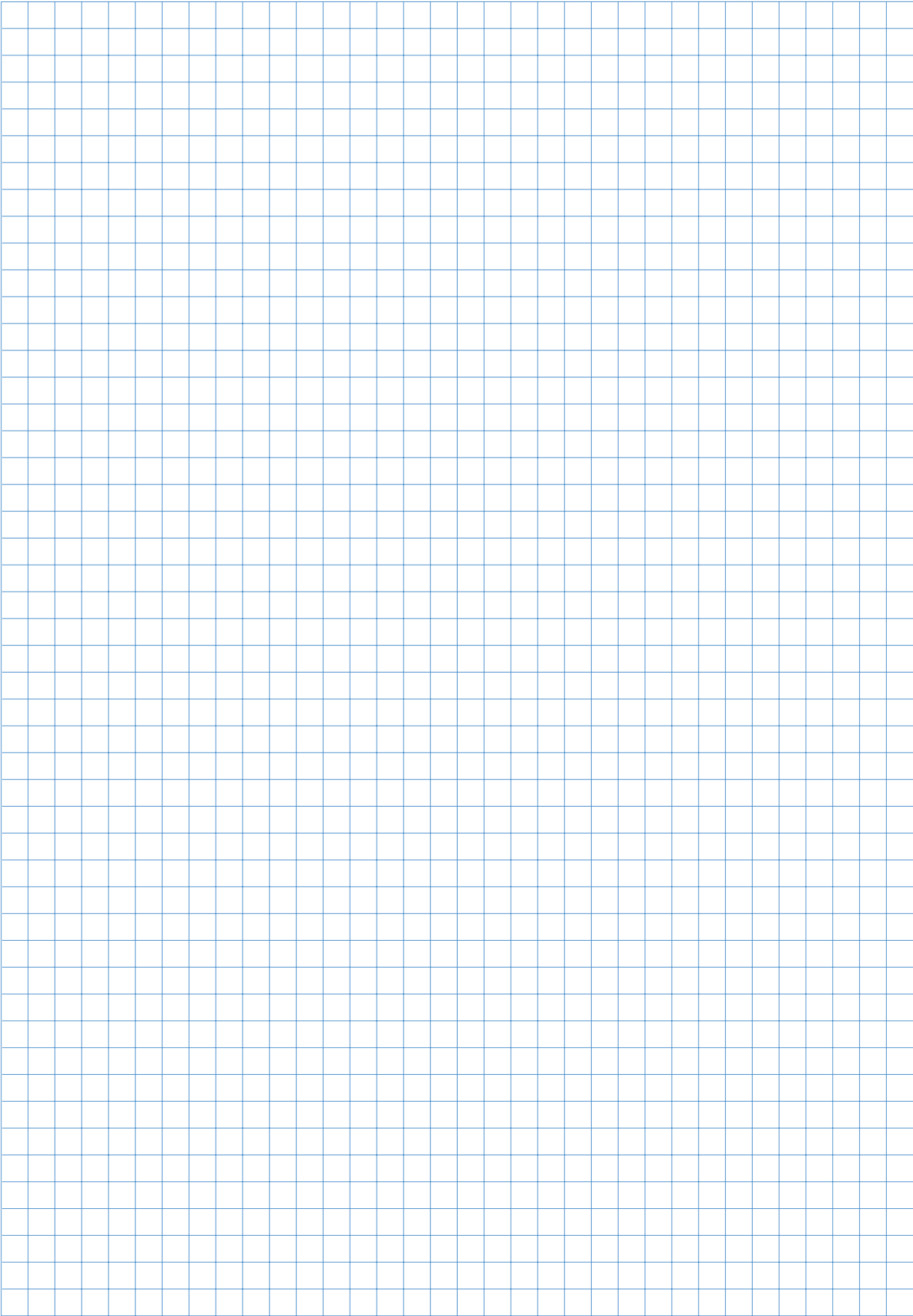
Selection guide

Linear actuators	Type (series)	Max. force		Max. speed		Stroke (S) standard	Features	Page
		push	pull	no load	full load			No.
		N	N	mm/s	mm/s	mm		
	SJ-255	2 000	2 000	7,2	6,6	100-600	AC-actuator	28
	SJ-256	2 500	2 500	6,0	5,5	100-600	AC-actuator	28
	SJ-257	3 000	3 000	4,5	4,0	100-600	AC-actuator	28
	SJ-355	3 000	3 000	7,2	6,6	100-600	AC-actuator	28
	SJ-356	3 500	3 500	6,0	5,5	100-600	AC-actuator	28
	SJ-358	4 000	4 000	4,5	4,0	100-600	AC-actuator	28
	SJ-455	4 000	4 000	7,2	6,6	100-600	AC-actuator	28
	SJ-456	4 500	4 500	6,0	5,5	100-600	AC-actuator	28
	SJ-458	5 000	5 000	4,5	4,0	100-600	AC-actuator	28

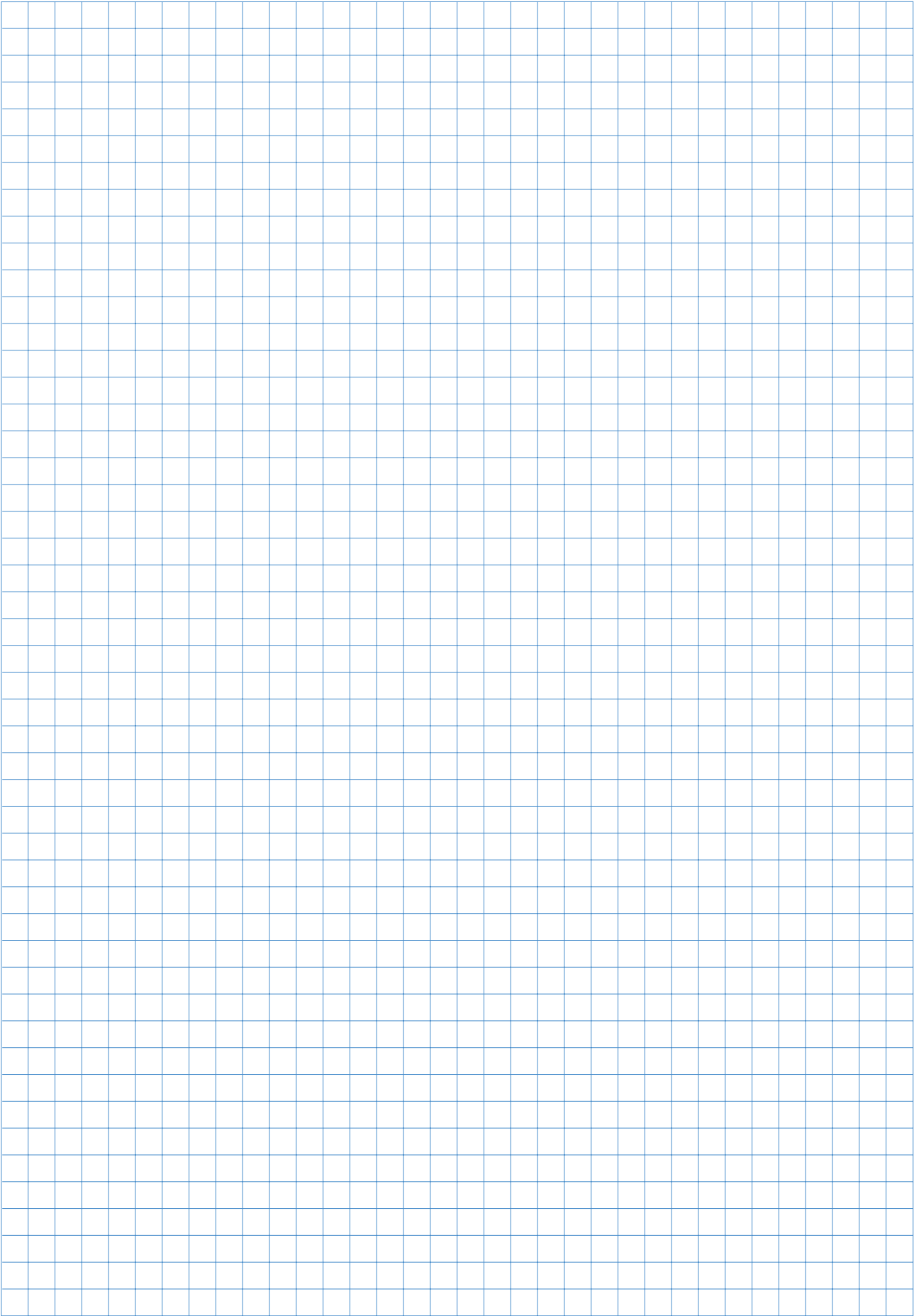
Control units	Type	Control	Max. motor connections	Input	Output	Protection class	Features	Page
			n°	VAC	VDC/A	IP		No.
	CB200S	Basic functions	3	(100 - 240)*	24/3	51	Standard	30
	CB200A	Encoder processing	1	(100 - 240)*	24/3	51	Anti-pinching	30
	CB300S	Basic functions	2	(100 - 240)*	24/3	51	Standard	31
	CB300A	Encoder processing	2	(100 - 240)*	24/3	51	Anti-pinching	31
	CB800S	Basic functions	4	(100 - 240)*	24/6	51/65	Standard	32
	CB800B	Basic functions	4	(100 - 240)*	24/6	51/65	Battery	32
	CB800E	Basic functions	4	(100 - 240)*	24/6	51/65	External DC input	32

* See type key for available voltage

Hand switch	Type	Operating power	Max. operating motors	Protection class	Colour	Page
		VDC/mA	n°	IP		No.
	HS112	40/50	1	51	Black	33
	HS124	40/50	2	51	Black	33
	HS126	40/50	2	51	Black	33
	HS138	40/50	3	51	Black	33
	HS148	40/50	4	51	Black	33







Linear actuators

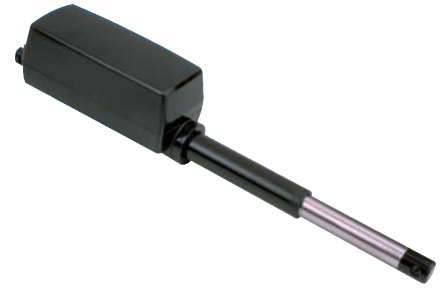
MD4 series

Features / Benefits

- Ambient temperature +5 °C to +40 °C
- Compact DC-actuator
- Space saving installation
- Protection class IP66
- Rear clevis end (metal)
- Self-locking brake for "A3" and "A4" versions
- Two way integrated limit switch protection
- Low noise level
- Duty cycle max. 10 % or 6 min./hour at continuous use
- Comply with EN60601-1

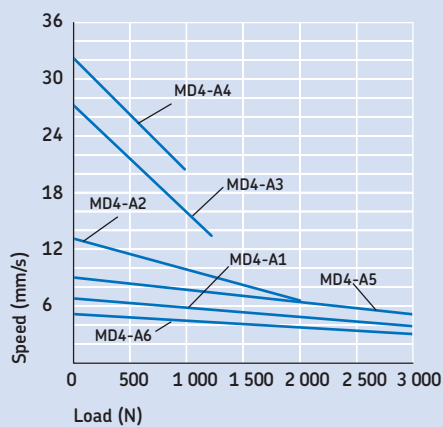
Options

- Hall effect sensor

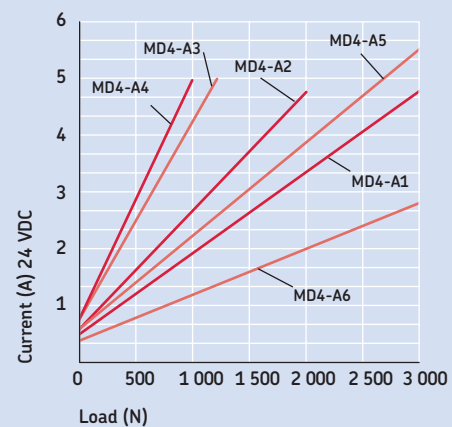


Performance diagram:

Speed vs Load (force)



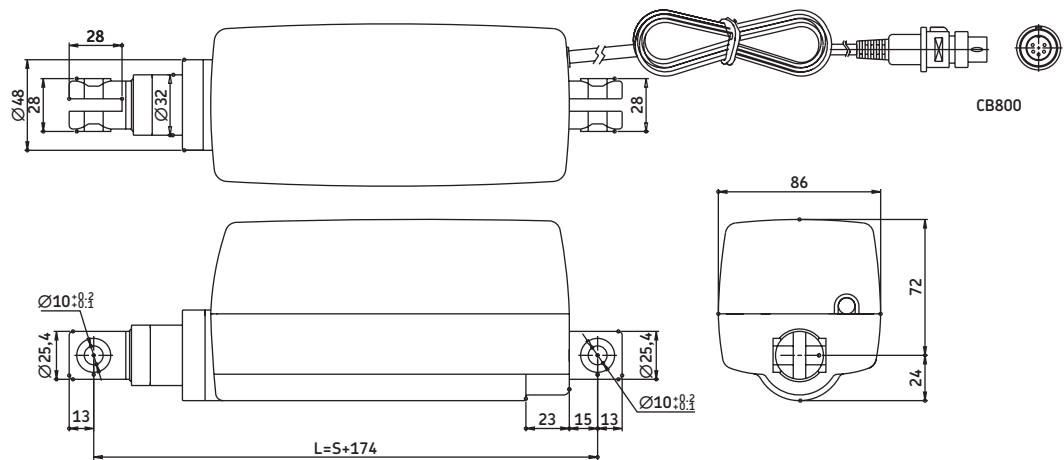
Current vs Load (force)



Type	Force push	pull	Max. speed no load	full load	Stroke (S)	Retr. length* (L)	Voltage	Protection class	Weight
	N	N	mm/s	mm/s	mm	mm	VDC	IP	kg
MD4-A1	3 000	0	6,7	3,7	100-400	S+174	24	66	3,5
MD4-A2	2 000	0	13	6,4	100-400	S+174	24	66	3,5
MD4-A3	1 200	0	25	13,4	100-400	S+174	24	66	3,5
MD4-A4	1 000	0	32	20	100-400	S+174	24	66	3,5
MD4-A5	3 000	0	8,5	5,0	100-400	S+174	24	66	3,5
MD4-A6	3 000	0	5,0	3,0	100-400	S+174	24	66	3,5

* See type key on next page.

MD4



	MD4	A					
Type							
Load (N) / Speed	1 2 3 4 5 6						
Stroke	100 150 200 250 300 400 Other stroke lengths; 100 < S < 400 mm						
Option 1	HS						
Customized cable length options:	XX						
Specify requested cable length in dm							

Linear actuators

FD series

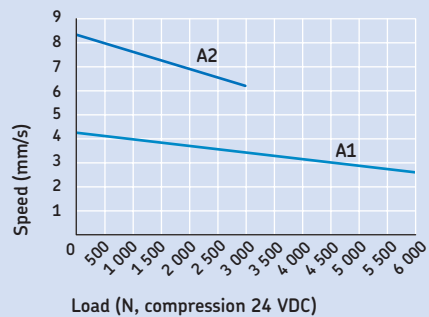
Features / Benefits

- Ambient temperature -26 °C to +65 °C
- Protection class IP52
- Build in limit switches (factory pre-set)
- Hall effect/Reed sensors
- Rear clevis can be turned 90°
- Compatible control boxes: CB200/300/800
- Duty cycle max. 10 % or 6 min./hour at continuous use

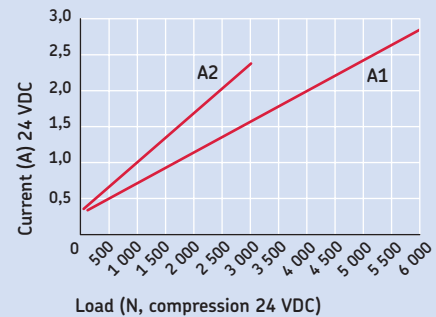


Performance diagram:

Speed vs Load (force)



Current vs Load (force)



Type	Force push	pull	Max. speed no load	full load	Stroke (S)	Retr. length* (L1;L2)	Voltage	Protection class	Weight
	N	N	mm/s	mm/s	mm	mm	VDC	IP	kg
FD A1	6 000	4 000	4,2	2,6	50-300	-*	24	52	2,5
FD A2	3 000	2 000	8,2	6,2	50-300	-*	24	52	2,5

Dimensions in mm*

Stroke	50	100	150	200	250	300
Retracted length (L1)	250	300	360	410	470	520
Retracted length (L2)	210	260	320	370	430	480

FD



Linear actuators

LD4 series

Features / Benefits

- Ambient temperature +5 °C to +40 °C
- Compact DC-actuator
- Protection class IP51
- Space saving installation
- Actuator and converter for universal applications
- Clevis ends (metal)
- Self-locking brake for "A3" and "A4" versions
- Low noise level
- Duty cycle max. 10 % or 6 min./hour at continuous use

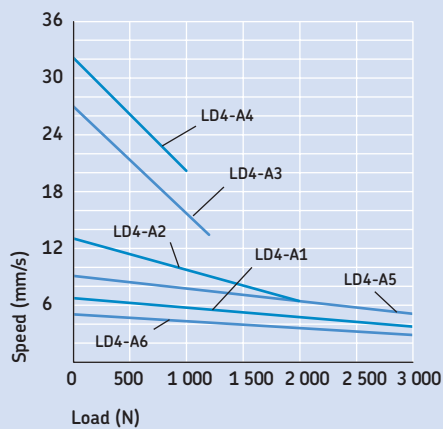
Options:

- Hall effect sensor

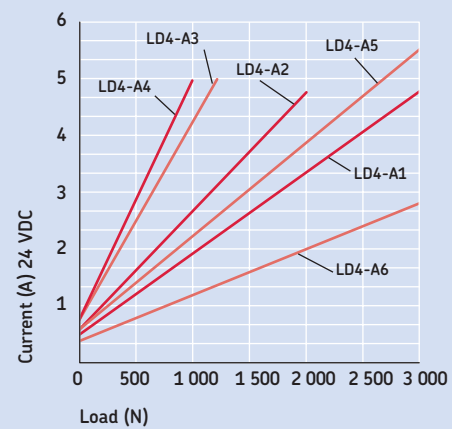


Performance diagram:

Speed vs Load (force)



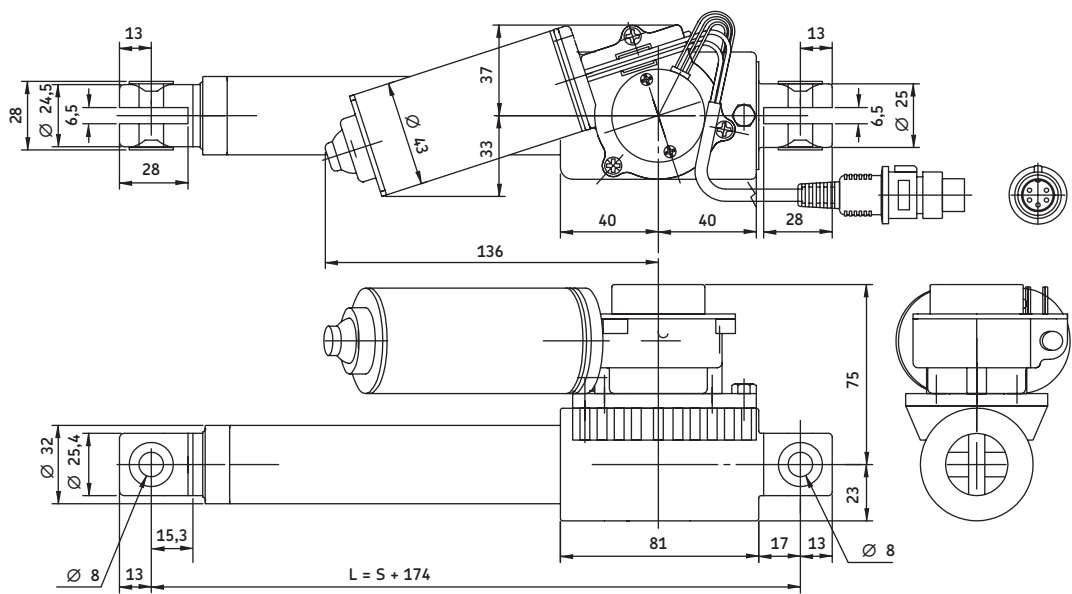
Current vs Load (force)



Type	Force push	pull	Max. speed no load	full load	Stroke (S)	Retr. length* (L)	Voltage	Protection class	Weight
	N	N	mm/s	mm/s	mm	mm	VDC	IP	kg
LD4-A1	3 000	0	6,7	3,7	100-400	S+174	24	51	2,5
LD4-A2	2 000	0	13	6,4	100-400	S+174	24	51	2,5
LD4-A3	1 200	0	25	13,4	100-400	S+174	24	51	2,5
LD4-A4	1 000	0	32	20	100-400	S+174	24	51	2,5
LD4-A5	3 000	0	8,5	5,0	100-400	S+174	24	51	2,5
LD4-A6	3 000	0	5,0	3,0	100-400	S+174	24	51	2,5

* Other retracted length - contact SKF

LD4



LD4 A - - - -

Type

Load (N) / Speed (mm/s)

- 3 000 / 6,7
- 2 000 / 13
- 1 200 / 25
- 1 000 / 32
- 3 000 / 8,5
- 3 000 / 5,0

- 1
- 2
- 3
- 4
- 5
- 6

Stroke

- 100 mm
- 150 mm
- 200 mm
- 250 mm
- 300 mm
- 400 mm
- Other stroke lengths; 100 < S < 400 mm

- 100
- 150
- 200
- 250
- 300
- 400
- XXX

Option 1

Hall effect sensor

HS

Customized cable length options:

Specify requested cable length in dm

XX

Linear actuators

LD6 series

Features / Benefits

- Ambient temperature +5 °C to +40 °C
- Compact DC-actuator
- Space saving installation
- Protection class IP51
- Actuator and converter for universal applications
- Clevis end (metal), die-cast
- Brake
- Low noise level
- Duty cycle max. 10 % or 6 min./hour at continuous use

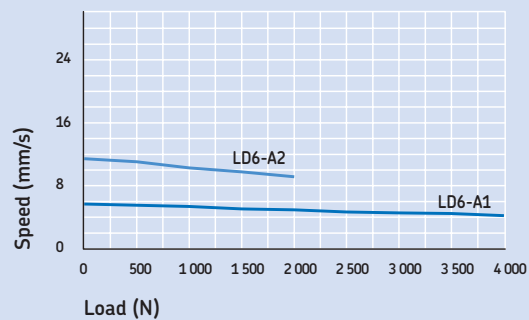
Options:

- Limit switch
- Potentiometer (for S = 100-200 mm)

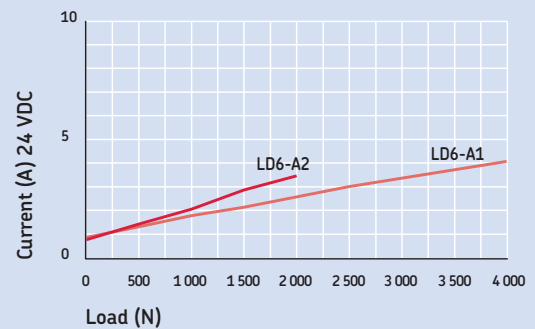


Performance diagram:

Speed vs Load (force)

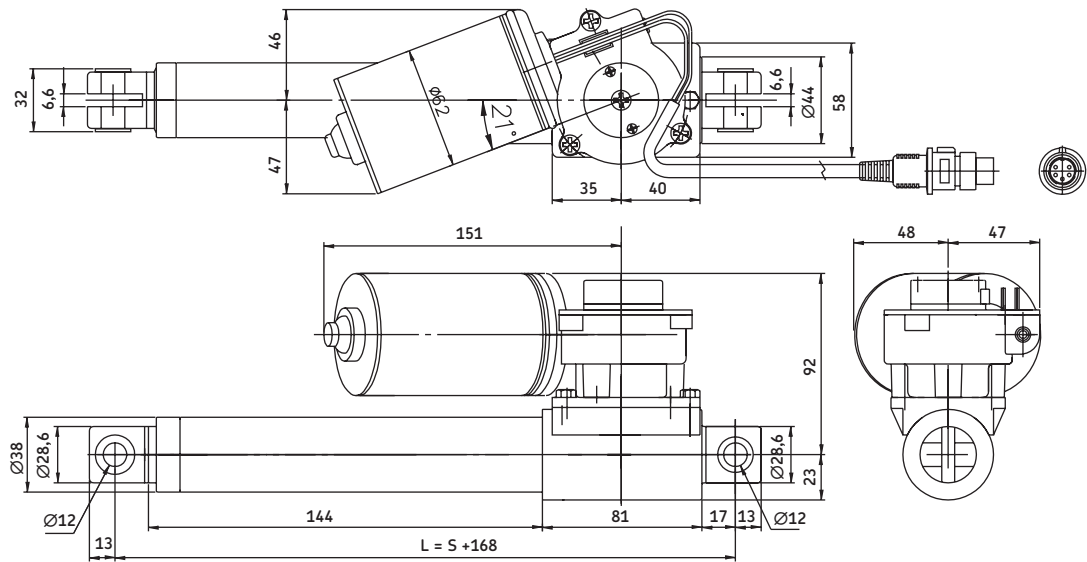


Current vs Load (force)



Type	Force push	pull	Max. speed no load	full load	Stroke (S)	Retr. length (L)	Voltage	Protection class	Weight
	N	N	mm/s	mm/s	mm	mm	VDC	IP	kg
LD6-A1	4 000	0	7	5	100-400	S+168	24	51	3,5
LD6-A2	2 000	0	13	11	100-400	S+168	24	51	3,5

LD6



	LD6 - - - -			
Type				
Load (N)				
4 000	A1			
2 000	A2			
Stroke				
100 mm	100			
150 mm	150			
200 mm	200			
250 mm	250			
300 mm	300			
400 mm	400			
Other stroke lengths; 100 < S < 400 mm	XXX			
Option				
Limit switch + potentiometer (only for S=100-200 mm)	P			
Customized cable length options:				
Specify requested cable length in dm	XX			

Linear actuators

M series

Features / Benefits

- Designed for horizontal/vertical mounting
- Push or pull load
- Extension tube (stainless steel)
- Protection tube (aluminium)
- Anodized coating (natural)
- Duty cycle 20 %

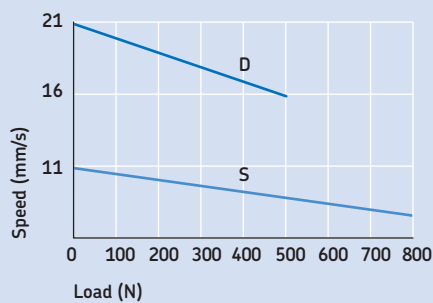
Options

- Hall effect/Reed sensors

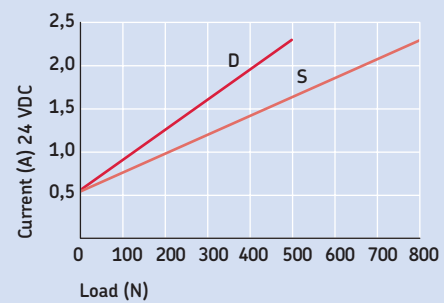


Performance diagram:

Speed vs Load (force)



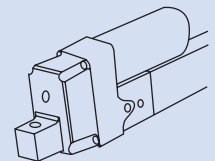
Current vs Load (force)



Type	Force push	pull	Max. speed no load	full load	Stroke* (S)	Retr. length (L)	Voltage	Protection class	Weight
	N	N	mm/s	mm/s	mm	mm	VDC	IP	kg
M24V-S	800	800	10,5	7,0	100-300	S+145	24	N/A	2,0
M24V-D	500	500	20	15	100-300	S+145	24	N/A	2,0

*Tolerance; S = +0 / -0,6 mm

M



Linear actuators

IMD3 series

Features / Benefits

- Ambient temperature -26 °C to +65 °C
- Lubrication for longer life time
- Extension tube (aluminium)
- Protection tube (aluminium)
- Zinc alloy housing
- Powder metal gears
- Integrated limit switches
- Duty cycle 25 %

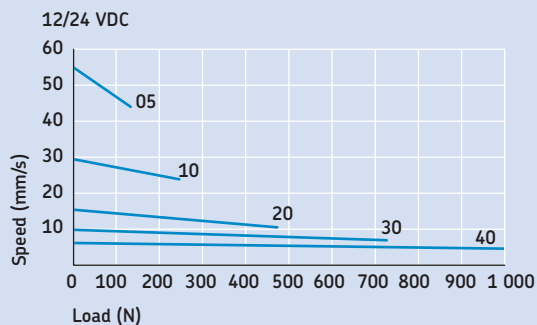
Options

- Potentiometer
- Attachments, Ø6,4 or 8,0 mm
- Protection class IP65

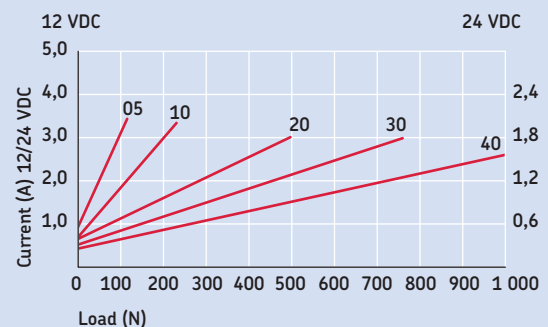


Performance diagram: (load versions; "05", "10", "20" "30" and "40" - see type key on next page)

Speed vs Load (force)



Current vs Load (force)



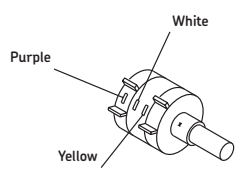
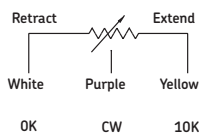
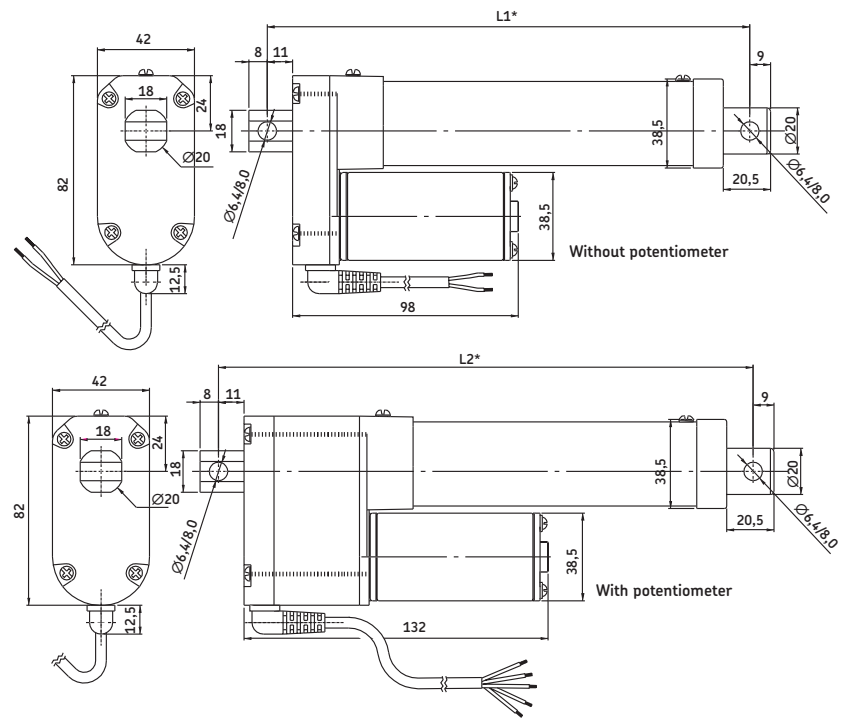
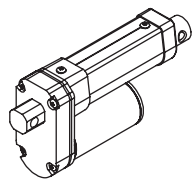
Type	Force**		Max. speed		Stroke (S)	Retr. length* (L1;L2)	Voltage	Protection class	Weight
	push	pull	no load	full load					
	N	N	mm/s	mm/s	mm	mm	VDC	IP	kg
IMD3 05	120	120	57	45	50-300	-*	12/24	53/65	1,5
IMD3 10	240	240	30	24	50-300	-*	12/24	53/65	1,5
IMD3 20	500	500	17	13	50-300	-*	12/24	53/65	1,5
IMD3 30	750	750	10	9	50-300	-*	12/24	53/65	1,5
IMD3 40	1 000	1 000	8	6	50-300	-*	12/24	53/65	1,5

* See table on below
 ** Max. static load is 2 500 N

Dimensions in mm*							
Stroke	50	100	150	200	250	300	
Retracted length (L1)	158	209	260	311	362	413	
Retracted length (L2)	192	243	294	345	396	447	

Linear actuators

IMD3



Potentiometer***	50	100	150	200	250	300
Stroke	50	100	150	200	250	300
Ohm/mm	94,4	94,4	47,2	47,2	15,72	15,72

Type

Voltage

12 VDC
24 VDC

Load (N)

120
240
500
750
1 000

Stroke

50 mm
100 mm
150 mm
200 mm
250 mm
300 mm
Other stroke lengths; 50 < S < 300 mm

Option 1

Potentiometer (10 kΩ)***

Option 2

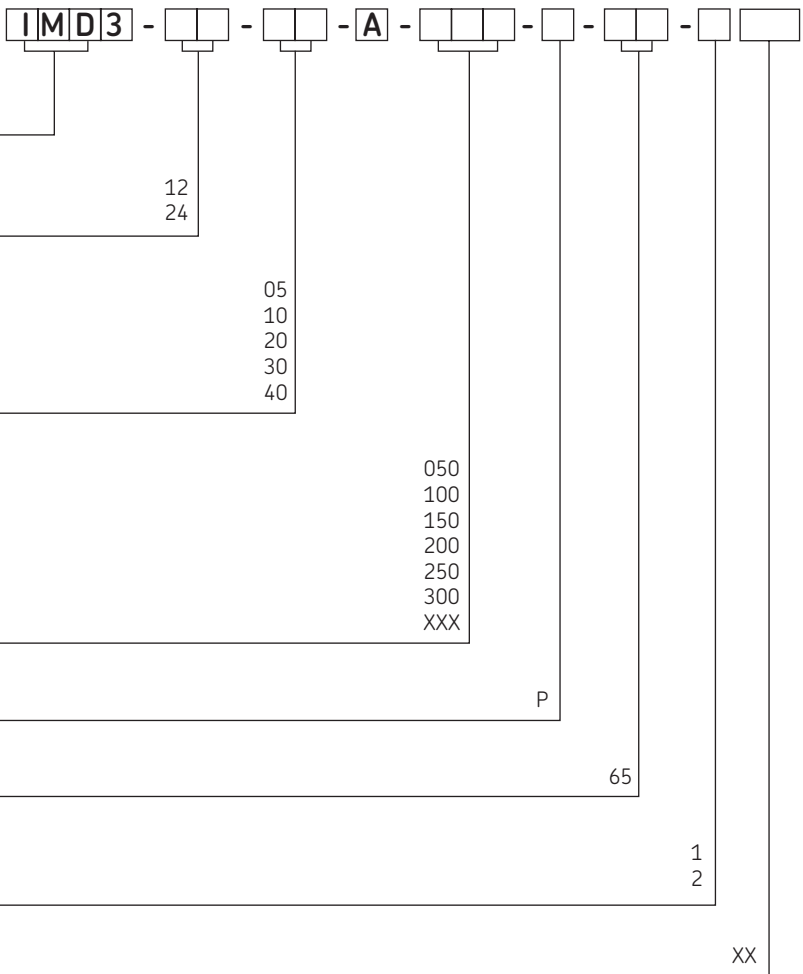
Protection class IP65

Option 3 (attachments)

Hole Ø=6,4 mm (standard)
Hole Ø=8,0 mm

Customized cable length options:

Specify requested cable length in dm



Linear actuators

ID8A series

Features / Benefits

- Ambient temperature -26 °C to +65 °C
- Well sealed (O-ring)
- Extension tube (steel), powder coated
- Protection tube (steel), powder coated
- Powder coated aluminium alloy housing
- Powder metal gears
- Enhanced corrosion resistance
- Overload protection (clutch)
- Lubricated for service life
- Robust, designed for tough environment
- Static load capacity 4 500 N
- Self-locking
- Duty cycle 25 %
- Certified (CE 55011)

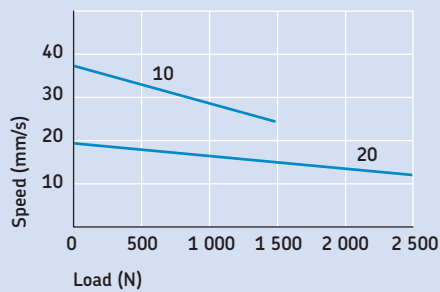


Options

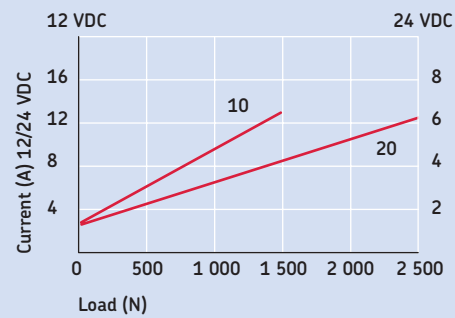
- Thermo protection

Performance diagram: (load versions; "10" and "20" - see type key on next page)

Speed vs Load (force)



Current vs Load (force)



Type	Force push	pull	Max. speed no load	full load	Stroke (S1)	Retr. length* (L1)	Voltage	Protection class	Weight
	N	N	mm/s	mm/s	mm	mm	VDC	IP	kg
ID8A 10	1 500	1 500	38	25	100-600	-*	12/24	52/65	6,0
ID8A 20	2 500	2 500	20	13	100-600	-*	12/24	52/65	6,0

With limit switch*							Without limit switch**					
Stroke (mm)	100	150	200	300	450	600	100	150	200	300	450	600
L1 (Retracted length in mm)*	338	389	440	540	772	924	262	313	364	465	696	848
L2 (Retracted length in mm)*	376	427	478	578	810	962	300	351	402	503	734	886
S (Maximum travel in mm)*	102	153	203	305	457	610	102	153	203	305	457	610

* Tolerance; S and L = ± 5,0 mm

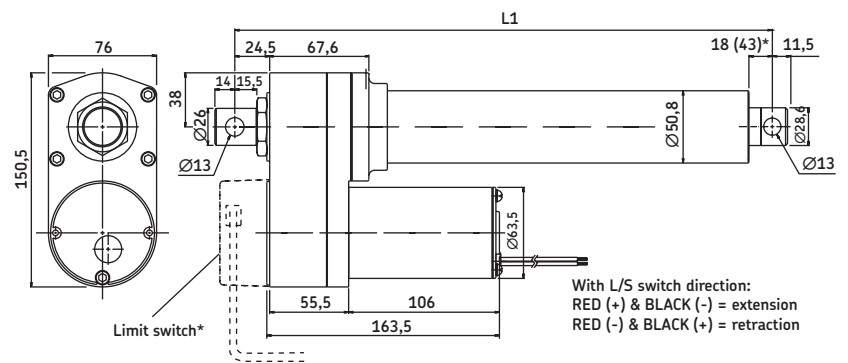
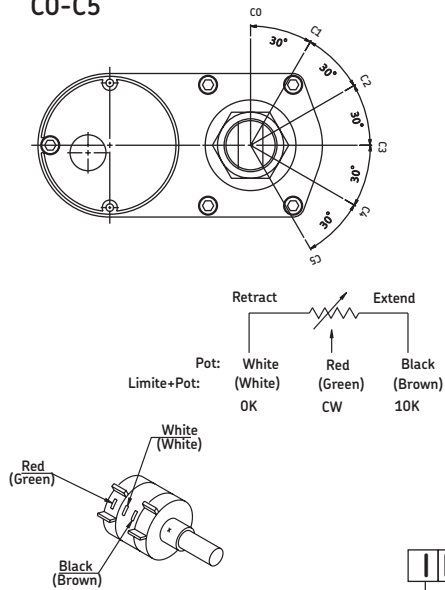
** Tolerance; L = ± 3,8 mm, S = ± 2,5 mm

Potentiometer***						
Stroke	100	150	200	300	450	600
Ohm/mm	60,0	60,0	30,0	30,0	10,0	10,0

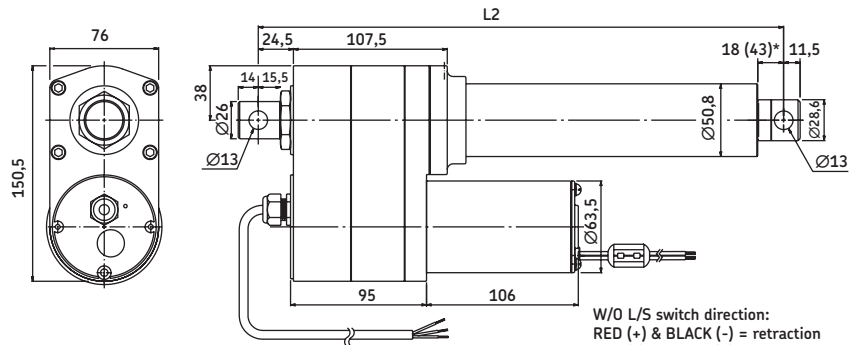
Linear actuators

ID8A

Different rear clevis mounting: C0-C5



With L/S switch direction:
RED (+) & BLACK (-) = extension
RED (-) & BLACK (+) = retraction



W/O L/S switch direction:
RED (+) & BLACK (-) = retraction
RED (-) & BLACK (+) = extension

Type

Voltage

12 VDC
24 VDC

Load (N)

1 500
2 500

Stroke

100 mm
150 mm
200 mm
300 mm
450 mm
600 mm
Other stroke lengths; 100 < S < 600 mm

Option 1

Limit switches (only for load version 20)

Option 2

Potentiometer

Option 3

Protection class, IP65 (not available with option "1" and/or "2")

Option 4

Thermo protection

Orientation rear attachment

0°
30°
60°
90°
120°
150°

C0
C1
C2
C3
C4
C5

Customized cable length options:

Specify requested cable length in dm

XX

Linear actuators

ID8B series

Features / Benefits

- Ambient temperature -26 °C to +65 °C
- High efficiency ball screw
- Well sealed (O-ring)
- Extension tube (stainless steel)
- Protection tube (steel), powder coated
- Powder coated aluminium alloy housing
- Powder metal gears
- Enhanced corrosion resistance
- Overload protection (clutch)
- Lubrication for service life
- Robust, designed for tough environment

- Static load capacity 13 600 N
- No back driving
- Duty cycle 25 %
- Certified (CE 55011)

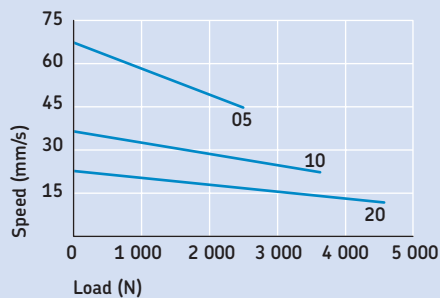
Option

- Thermo protection
- Adjustable limit switches

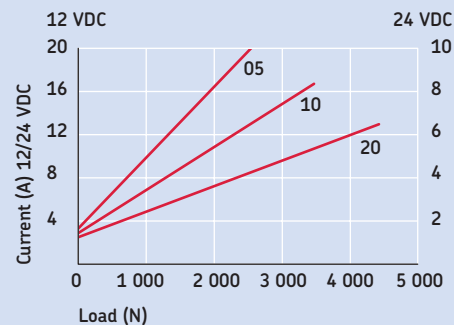


Performance diagram: (load versions; "05", "10" and "20" - see type key on next page)

Speed vs Load (force)



Current vs Load (force)



Type	Force push	pull	Max. speed no load	full load	Stroke (S1)	Retr. length* (L1)	Voltage	Protection class	Weight
	N	N	mm/s	mm/s	mm	mm	VDC	IP	kg
ID8B 05	2 300	2 300	65	45	100-600	-*	12/24	52/65	6,5
ID8B 10	3 500	3 500	36	22	100-600	-*	12/24	52/65	6,5
ID8B 20	4 500	4 500	22	13	100-600	-*	12/24	52/65	6,5

With limit switch	100	150	200	300	450	600	Without limit switch**	100	150	200	300	450	600
Stroke (mm)													
L1 (Retracted length in mm)*	378	429	479	580	810	962	302	353	404	505	735	887	
L2 (Retracted length in mm)*	416	467	517	618	848	1 000	340	391	442	543	773	925	
S (Maximum travel in mm)*	98	150	201	302	457	610	98	150	201	302	457	610	

* Tolerance; S and L = ± 5,0 mm

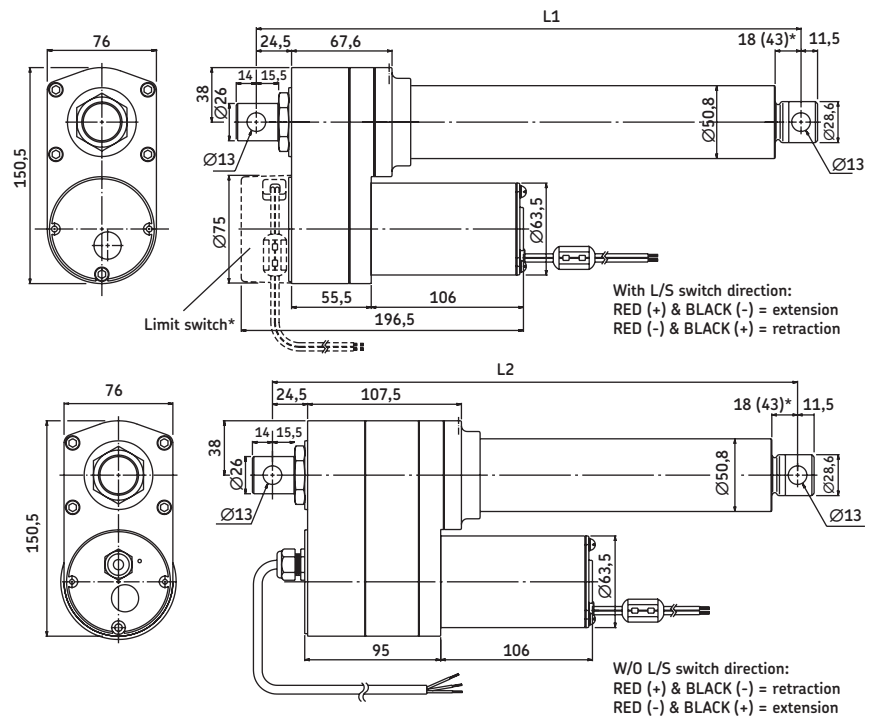
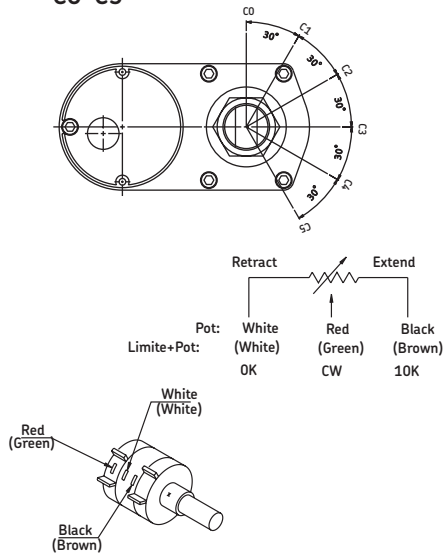
** Tolerance; L = ± 3,8 mm, S = ± 2,5 mm

Potentiometer***	100	150	200	300	450	600
Stroke						
Ohm/mm	60,0	60,0	30,0	30,0	10,0	10,0

Linear actuators

ID8B

Different rear clevis mounting: C0-C5



Type

Voltage

12 VDC
24 VDC

Load (N)

2 300
3 500
4 500

Stroke

100 mm
150 mm
200 mm
300 mm
450 mm
600 mm
Other stroke lengths; $100 < S < 600$ mm

Option 1

Limit switches (only for load version 20)

Option 2

Potentiometer

Option 3

Protection class, IP65 (not available with option "1" and/or "2")

Option 4

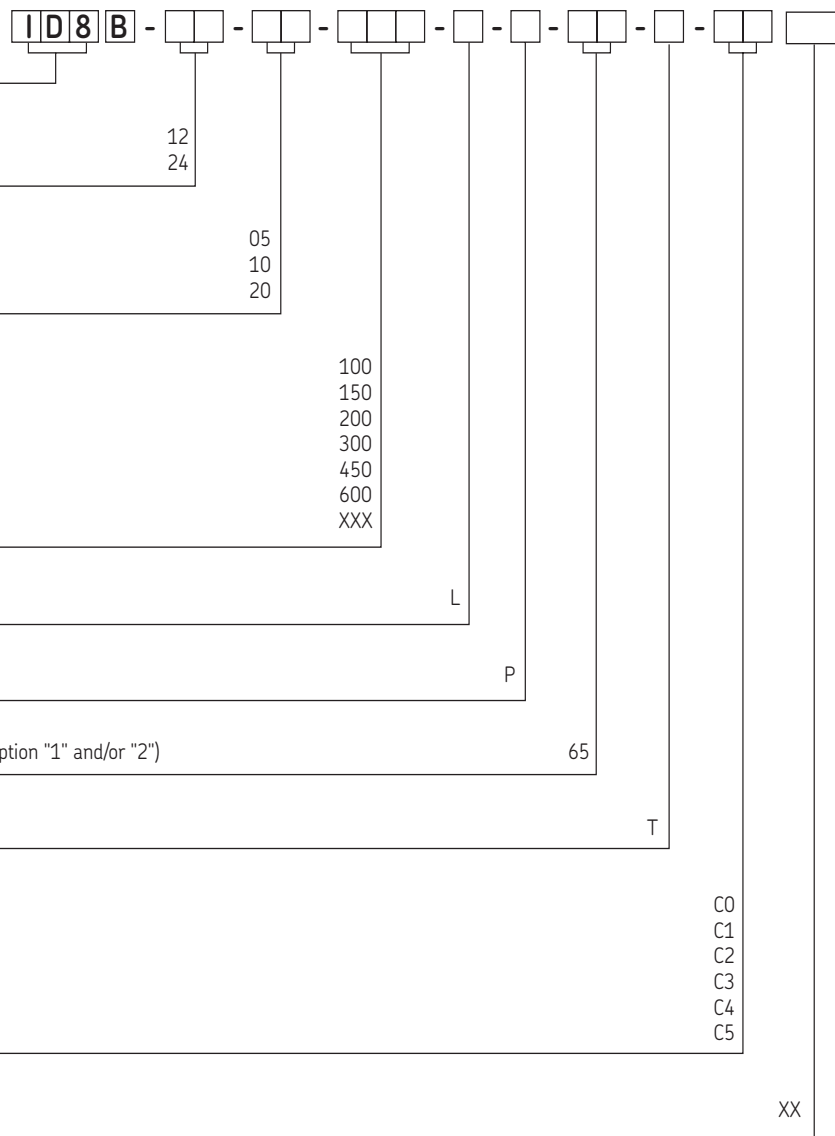
Thermo protection

Orientation rear attachment

0°
30°
60°
90°
120°
150°

Customized cable length options:

Specify requested cable length in dm



IA4A series

Features / Benefits

- Ambient temperature -26 °C to +65 °C
- Motor with thermal protection
- Well sealed by O-ring
- Extension tube (stainless steel)
- Protection tube (steel), powder coated
- Powder coated aluminium alloy housing
- Powder metal gears
- Enhanced corrosion resistance
- Overload protection (clutch)
- Lubricated for service life

- Robust, designed for tough environment
- Static load capacity 4 500 N
- Self-locking
- Duty cycle 25 %

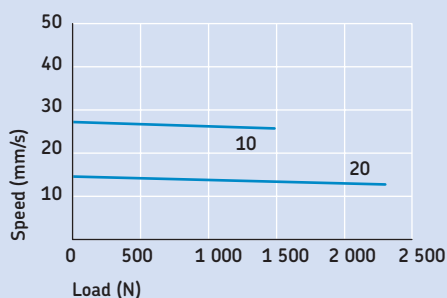
Option

- Adjustable limit switches

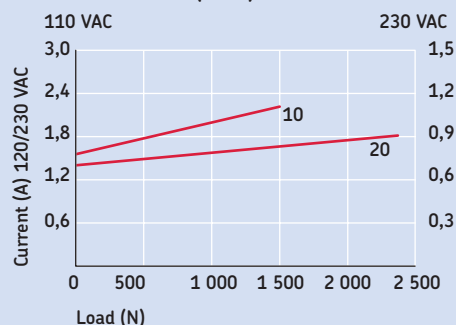


Performance diagram: (load versions; "10" and "20" - see type key on next page)

Speed vs Load (force)



Current vs Load (force)



Type	Force push	pull	Max. speed no load	full load	Stroke (S)	Retr. length* (L)	Voltage	Protection class	Weight
	N	N	mm/s	mm/s	mm	mm	VAC	IP	kg
IA4A 10	1 500	1 500	29	25	100-600	-*	110/230	51	8,5
IA4A 20	2 300	2 300	16	14	100-600	-*	110/230	51	8,5

With limit switch*	100	150	200	300	450	600	Without limit switch**	100	150	200	300	450	600
Stroke (mm)													
L1 (Retracted length in mm)*	456	506	556	658	810	962	380	431	481	583	735	887	
L2 (Retracted length in mm)*	494	544	594	696	848	1 000	418	469	519	621	773	925	
S (Maximum travel in mm)*	102	153	203	305	457	610	102	153	203	305	457	610	

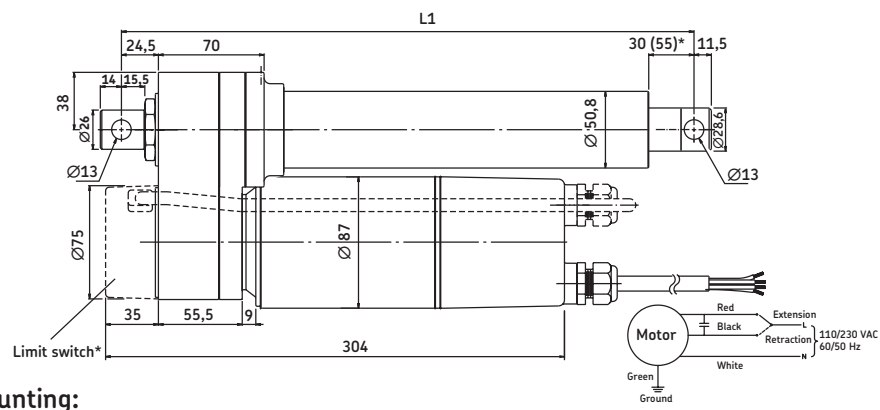
* Tolerance; S and L = ± 5,0 mm

** Tolerance; L = ± 3,8 mm, S = ± 2,5 mm

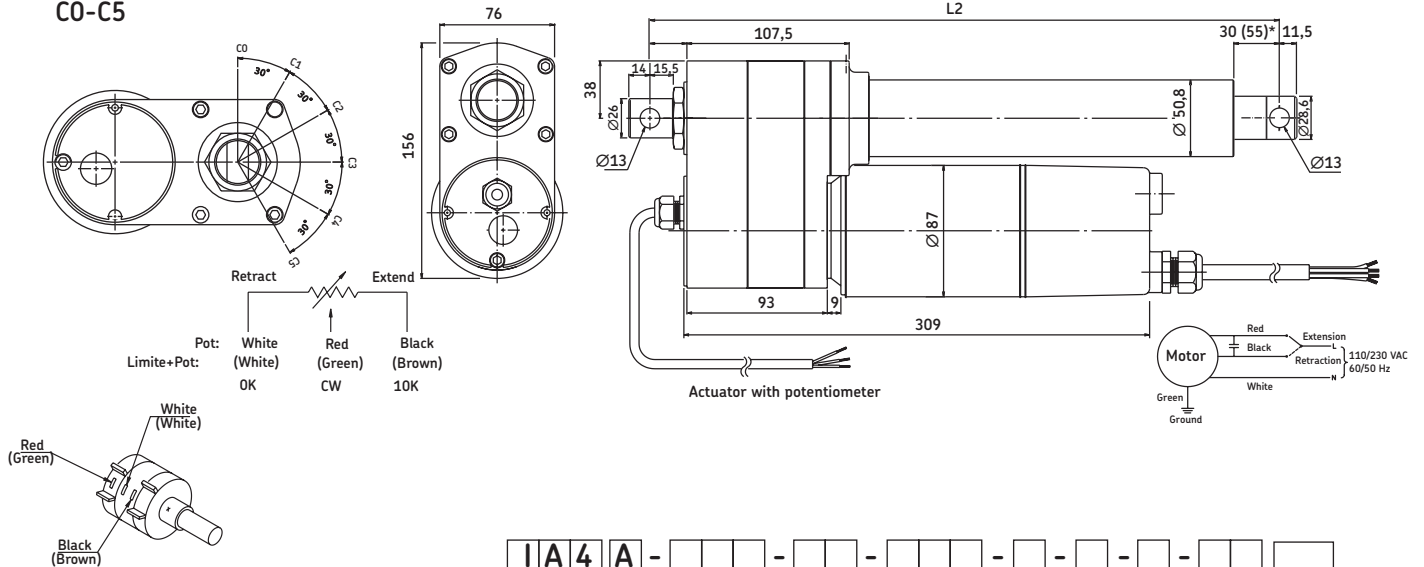
Potentiometer***	100	150	200	300	450	600
Stroke						
Ohm/mm	60,0	60,0	30,0	30,0	10,0	10,0

Linear actuators

IA4A



Different rear clevis mounting: C0-C5



Type

Voltage

110 VAC
230 VAC

Load (N)

1 500
2 300

Stroke

100 mm
150 mm
200 mm
300 mm
450 mm
600 mm
Other stroke lengths; 100 < S < 600 mm

Option 1

Limit switches (only for load version 20)

Option 2

Potentiometer

Option 3

Thermo protection

Orientation rear attachment

0°
30°
60°
90°
120°
150°

Customized cable length options:

Specify requested cable length in dm

XX

IA4B series

Features / Benefits

- Ambient temperature -26 °C to +65 °C
- High efficiency ball screw
- Motor with thermal protection
- Well sealed by O-ring
- Extension tube (stainless steel)
- Protection tube (steel), powder coated
- Powder coated aluminium alloy housing
- Powder metal gears
- Enhanced corrosion resistance
- Overload protection (clutch)
- Lubricated for service life
- Robust, designed for tough environment
- Static load capacity 13 600 N
- No back driving
- Duty cycle 25 %

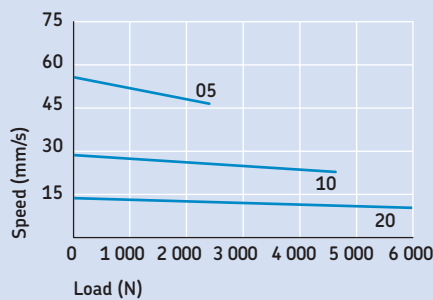
Option

- Adjustable limit switches

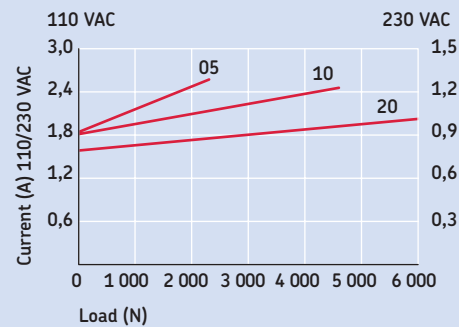


Performance diagram: (load versions - see type key)

Speed vs Load (force)



Current vs Load (force)



Type	Force push	pull	Max. speed no load	full load	Stroke (S)	Retr. length* (L)	Voltage	Protection class	Weight
	N	N	mm/s	mm/s	mm	mm	VAC	IP	kg
IA4B 05	2 300	2 300	57	46	100-600	-*	110/230	51	9,0
IA4B 10	4 500	4 500	29	25	100-600	-*	110/230	51	9,0
IA4B 20	6 000	6 000	15	12	100-600	-*	110/230	51	9,0

With limit switch*	100	150	200	300	450	600	Without limit switch**	100	150	200	300	450	600
Stroke (mm)													
L1 (Retracted length in mm)*	456	506	556	658	810	962	380	431	481	583	735	887	
L2 (Retracted length in mm)*	494	544	594	696	848	1 000	418	469	519	621	773	925	
S (Maximum travel in mm)*	102	153	203	305	457	610	102	153	203	305	457	610	

* Tolerance; S and L = ± 5,0 mm

** Tolerance; L = ± 3,8 mm, S = ± 2,5 mm

Potentiometer***	100	150	200	300	450	600
Stroke						
Ohm/mm	60,0	60,0	30,0	30,0	10,0	10,0

IA4B

Technical drawings of the actuator assembly, showing side and front views with dimensions and electrical connections.

Side View (Top):

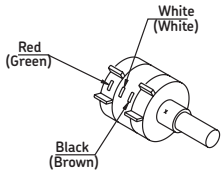
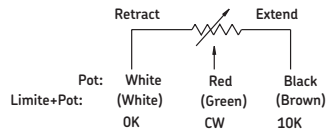
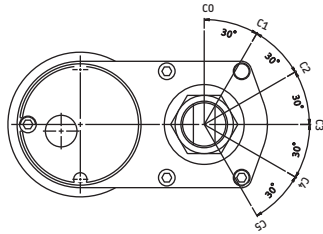
- Overall length: $L1$
- Dimensions: 24,5, 70, 30 (55)*, 11,5, 38, 14, 15,5, 15,08, 13, 75, 35, 55,5, 9, 304, 87, 50,8.
- Limit switch* is indicated.
- Motor connection: Red (Extension), Black (Retraction), White (N), Green (Ground). Voltage: 110/230 VAC, 60/50 Hz.

Side View (Bottom):

- Overall length: $L2$
- Dimensions: 107,5, 30 (55)*, 11,5, 38, 14, 15,5, 15,08, 13, 75, 93, 9, 309, 87, 50,8.
- Potentiometer is indicated.
- Motor connection: Red (Extension), Black (Retraction), White (N), Green (Ground). Voltage: 110/230 VAC, 60/50 Hz.

Front View (Left):

- Dimensions: 76, 156.



Type	I A 4 B
Voltage 110 VAC 230 VAC	110 230
Load (N) 2 300 4 500 6 000	05 10 20
Stroke 100 mm 150 mm 200 mm 300 mm 450 mm 600 mm Other stroke lengths; 100 < S < 600 mm	100 150 200 300 450 600 XXX
Option 1 Limit switches (only for load version 20)	L
Option 2 Potentiometer	P
Orientation rear attachment 0° 30° 60° 90° 120° 150°	C0 C1 C2 C3 C4 C5
Customized cable length options: Specify requested cable length in dm	XX

Linear actuators

SJ 25, 35, 45 series (AC-actuator)

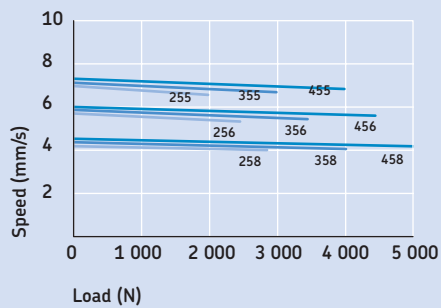
Features / Benefits

- Motor with thermal protection (+120±5 °C)
- Acme screw
- Self-locking
- Integrated limit switches
- Gear box (metal)
- Duty cycle 17%
- UL approved E128837 CSA certificate:
LR92531 (115 VAC), E226168 (230 VAC)

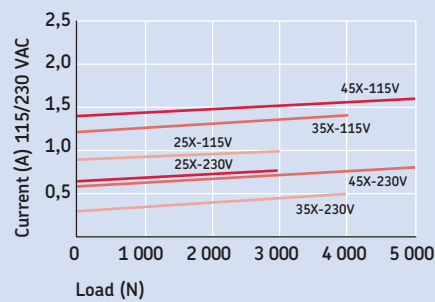


Performance diagram: (load versions - see type key)

Speed vs Load (force)



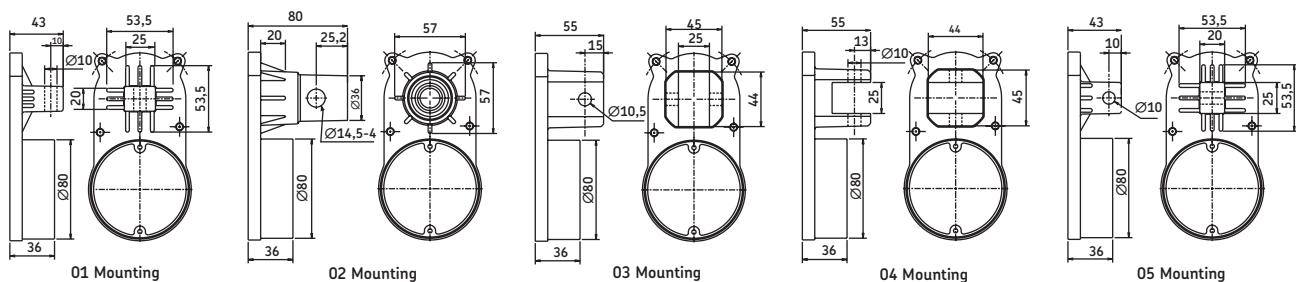
Current vs Load (force)



Type	Force push	pull	Max. speed no load	full load	Stroke* (S)	Retr. length** (L)	Voltage	Protection class	Weight
	N	N	mm/s	mm/s	mm	mm	VAC	IP	kg
SJ 255	2 000	2 000	7,2	6,6	100-600	S + 190/200/215	115/230	N/A	4,0
SJ 256	2 500	2 500	6,0	5,5	100-600	S + 190/200/215	115/230	N/A	4,0
SJ 258	3 000	3 000	4,5	4,0	100-600	S + 190/200/215	115/230	N/A	4,0
SJ 355	3 000	3 000	7,2	6,6	100-600	S + 190/200/215	115/230	N/A	4,5
SJ 356	3 500	3 500	6,0	5,5	100-600	S + 190/200/215	115/230	N/A	4,5
SJ 358	4 000	4 000	4,5	4,0	100-600	S + 190/200/215	115/230	N/A	4,5
SJ 455	4 000	4 000	7,2	6,6	100-600	S + 190/200/215	115/230	N/A	5,0
SJ 456	4 500	4 500	6,0	5,5	100-600	S + 190/200/215	115/230	N/A	5,0
SJ 458	5 000	5 000	4,5	4,0	100-600	S + 190/200/215	115/230	N/A	5,0

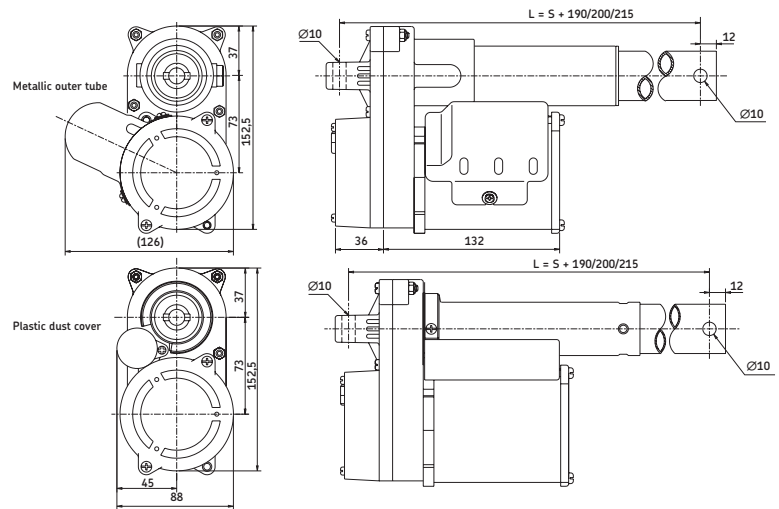
* Max. stroke for the tube version "I" is 250 mm.

** For clevis mounting; "01" and "05" L=S+190 mm, "02" L=S+215 mm, "03" and "04" L=S+200 mm.



Linear actuators

SJ 25, 35, 45 series



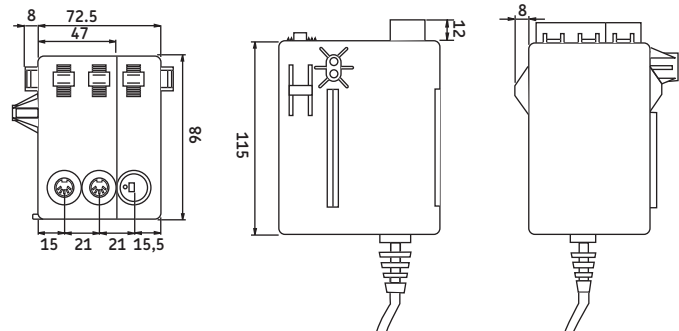
Type	SJ - - - - -									
Load (N) / Speed (mm/s)										
2 000 / 7,2		255								
2 500 / 6,0		256								
3 000 / 4,5		258								
3 000 / 7,2		355								
3 500 / 6,0		356								
4 000 / 4,5		358								
4 000 / 7,2		455								
4 500 / 6,0		456								
5 000 / 4,5		458								
Voltage										
115 VAC									115	
230 VAC									230	
Tube type										
With outer and inner tube										B
Inner tube with plastic dust protection cover										I
Inner tube only										Y
Mounting										
Square mounting										01
Tube mounting with 4 holes										02
Clevis mounting										03
Clevis mounting										04
Square mounting										05
Cable connector										
No connector										N
1x4C to control box										C
1x3C to AC plug, 1x3C to pedant										P
With one motor controller										L
Feedback										
Potentiometer										P
No sensor										N
Stroke										
100 mm										100
150 mm										150
200 mm										200
250 mm (250 mm is also the maximum stroke for tube version "I")*										250
300 mm										300
350 mm										350
400 mm										400
450 mm										450
500 mm										500
550 mm										550
600 mm										600
Customized cable length options:										
Specify requested cable length in dm										XX

Control units

Control box CB200

Features / Benefits

- Compact design
- CB200S with integrated overload protection
- CB200A with anti-pinching function
- Can be fitted to FD series actuator
- Duty cycle 10 %



Type	Control	Max. motor connections	Input	Output	Protection	Features
		n°	VAC	VDC/A	IP	
CB200S	Basic functions	3	(100 - 240)*	24/3	51	Standard
CB200A	Encoder processing	1	(100 - 240)*	24/3	51	Anti-pinching

* See type key for available voltage

Control box suitable for:

Actuator type/series: M, IMD3, FD, (CB200S/A)

Hand sets: HS-112, HS-124, HS-126, HS-138 (CB200S)
HS-112 (CB200A)

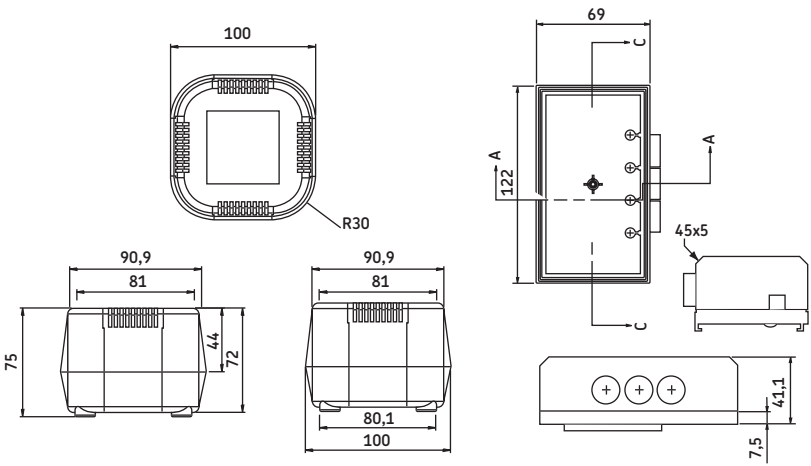
	CB	200	-	-	-	-
Model						
Type						
Standard version						S
Encoder processing version with anti-pinching function						A
Number of actuators						
1						1
2						2
3 (only for control box type "S")						3
Voltage (VAC)						
100						100
110-115						120
230						230
240						240

Control units

Control box CB300

Features / Benefits

- CB300S controls up to 2 actuators individually
- CB300A with anti-pinching function
- Control box can be fitted to FD series actuator
- Control box with separate external power supply box which can be placed on the floor next to the mains.
- Low voltage connection from the power supply to control box enables safety and low EMI/EMC operation
- Integrated overload protection
- Duty cycle 10 %



Type	Control	Max. motor connections n°	Input VAC	Output VDC/A	Protection IP	Features
CB300S	Basic functions	2	(100 - 240)*	24/3	51	Standard
CB300A	Encoder processing	2	(100 - 240)*	24/3	51	Anti-pinching

* See type key for available voltage

Control box suitable for:

Actuator type/series: M, IMD3, FD

Hand sets: HS-112, HS-124



Control units

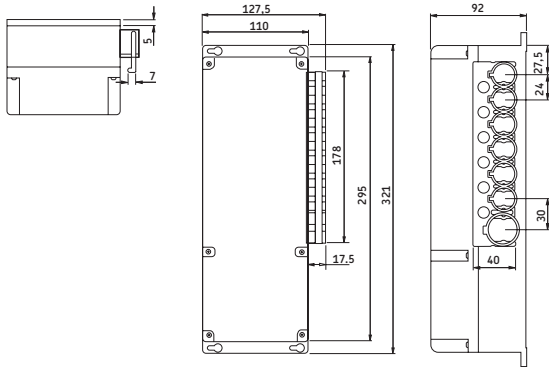
Control box CB800

Features / Benefits

- Controls up to 4 actuators individually
- Can be connected with external DC-power/battery
- With locking mechanism for DIN-plug and mains socket
- Integrated overload protection
- Duty cycle 10 %
- Protection class, IP51

Options

- Backup battery (CB800B only)
- Protection class, IP65



Type	Control	Max. motor connections	Input	Output	Protection	Features
		n°	VAC	VDC/A	IP	
CB800S	Basic functions	4	(100 - 240)*	24/6	51/65	Standard
CB800B	Basic functions	4	(100 - 240)*	24/6	51/65	Battery
CB800E	Basic functions	4	(100 - 240)*	24/6	51/65	External DC input

* See type key for available voltage

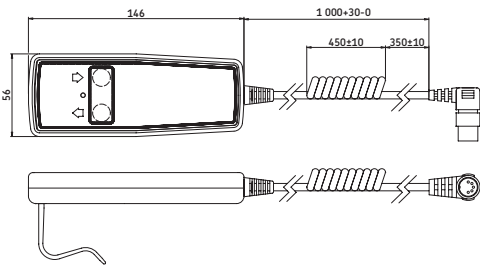
Control box suitable for:

Actuator type/series: M, IMD3, FD, MD4

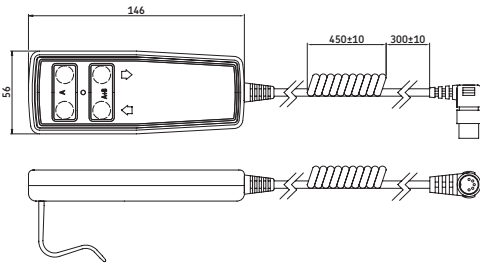
Hand sets: HS-138, HS-148

Model	CB800	-	-	-	-	-	-
Type	Standard version						
	Standard version with backup battery						
	Standard version with external DC-power input (only with 1 handset)						
Number of actuators	1						
	2						
	3						
	4						
Number of hand sets	1						
	2 (not available for type "E")						
Voltage (VAC)	100						
	110-115						
	230						
	240						
Option	Protection class, IP65						

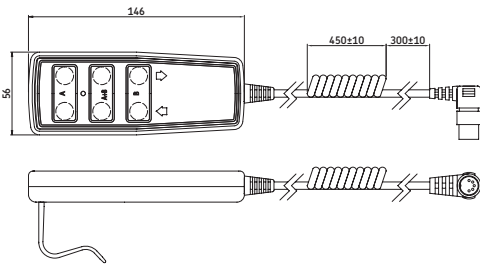
Hand switch



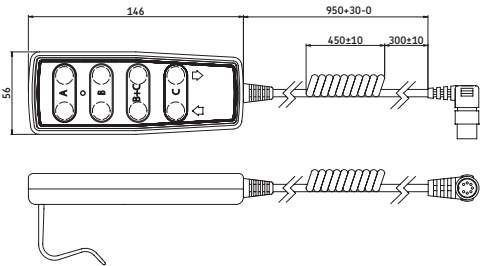
HS 112



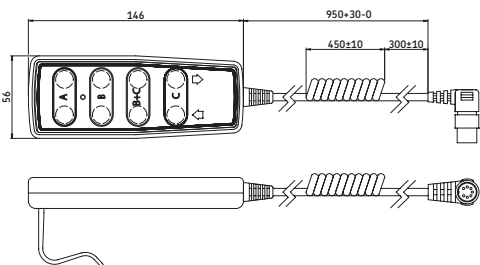
HS 124



HS 126



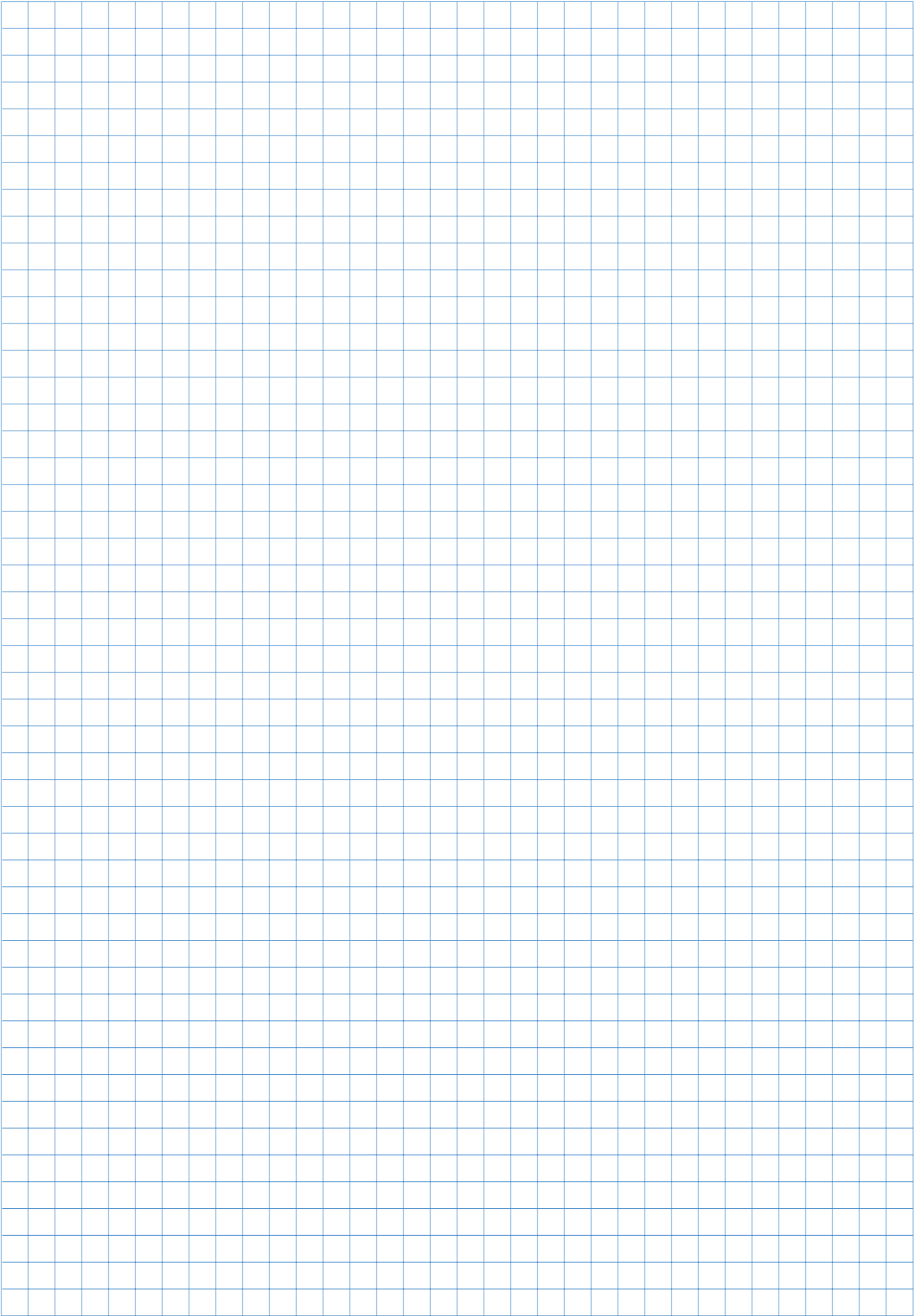
HS 138



HS 148









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