

CASM-40

Linear unit

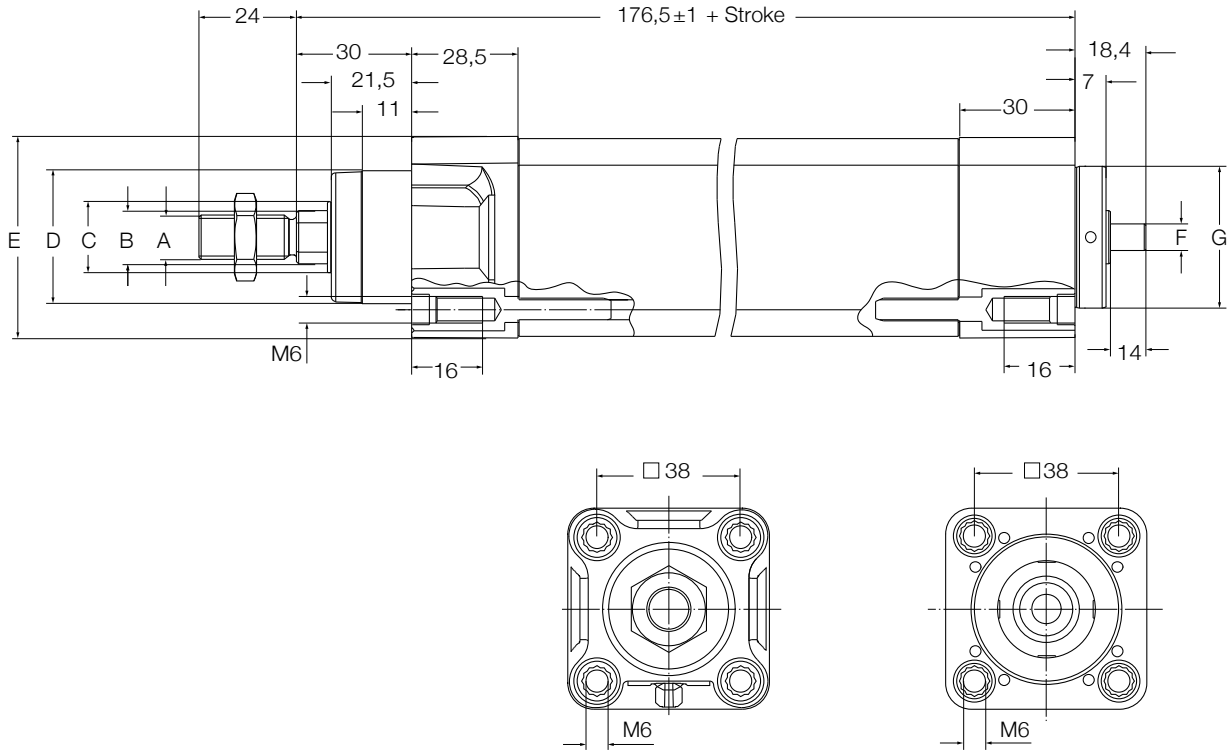


Technical data

| Designation | Symbol | Unit | CASM-40-LS | CASM-40-BS | CASM-40-BN |
|------------------------------------|----------------|-----------------------------------|------------|------------|------------|
| Performance Data | | | | | |
| Max. dynamic axial force | F_{max} | kN | 0,6 | 2,375 | 1,55 |
| Max. static axial force | F_{0max} | kN | 1,5 | 2,375 | 2,375 |
| Dynamic load capacity | C | kN | N/A | 4,8 | 6 |
| Maximum torque to reach F_{max} | M_{max} | Nm | 0,63 | 2,22 | 3,64 |
| Max. linear speed | v_{max} | mm/s | 70 | 300 | 826 |
| Max. rotational speed | n_{max} | 1/min | 1 680 | 3 600 | 3 900 |
| Max. acceleration | a_{max} | m/s ² | 1 | 6 | 6 |
| Duty cycle | D_{unit} | % | 60 | 100 | 100 |
| Mechanical Data | | | | | |
| Screw type | – | – | Lead screw | Ball screw | Ball screw |
| Screw diameter | d_{screw} | mm | 12,5 | 12 | 12,7 |
| Screw lead | p_{screw} | mm | 2,5 | 5 | 12,7 |
| Lead accuracy | – | – | N/A | G7 | G7 |
| Stroke | s | mm | 100...600 | 100...600 | 100...600 |
| Internal overstroke each side | s_0 | mm | 1 | 1 | 1 |
| Backlash | $s_{backlash}$ | mm | N/A | 0,07 | 0,07 |
| Efficiency | η_{lu} | % | 0,38 | 0,85 | 0,86 |
| Inertia @ 0 mm stroke | J_{lu} | 10 ⁻⁴ kgm ² | 0,1262 | 0,1246 | 0,1279 |
| Δ Inertia per 100 mm stroke | ΔJ | 10 ⁻⁴ kgm ² | 0,0123 | 0,0103 | 0,0144 |
| Weight @ 0 mm stroke | m_{lu} | kg | 1,25 | 1,26 | 1,29 |
| Δ weight per 100 mm stroke | Δm | kg | 0,46 | 0,46 | 0,46 |
| Environment and Standards | | | | | |
| Ambient temperature | $T_{ambient}$ | °C | 0...+50 | 0...+50 | 0...+50 |
| Max. humidity | φ | % | 95 | 95 | 95 |
| Degree of protection ¹⁾ | IP | – | 54S | 54S | 54S |
| Standards | – | – | ISO 15552 | ISO 15552 | ISO 15552 |

¹⁾ IP65S protection on request. Please contact Ewellix.

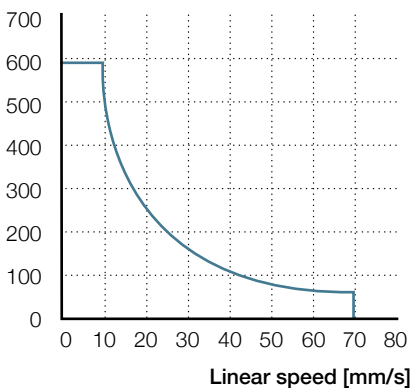
Dimensional drawing



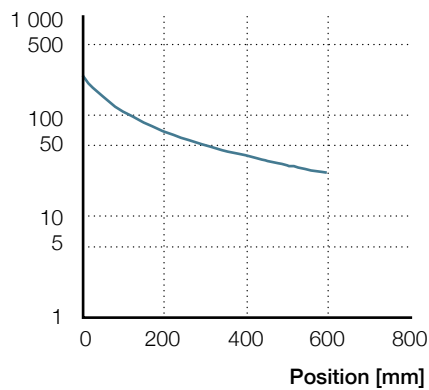
| | A | B | C | D | E | F | G |
|---------|------------|-----|-----|--------|--------|------|--|
| | | mm | | | | | |
| CASM-40 | M12 × 1,25 | Ø16 | Ø20 | Ø35d11 | □ 54,3 | Ø8h6 | Ø40 ^{-0,08} / _{-0,1} |

Performance diagrams

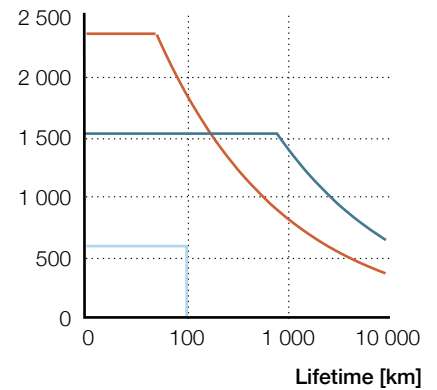
Axial force [N]



Radial load [N]



F_m [N]



Valid only for CASM-40-LS.
No limitation for ball screw types
(max. load at max. speed).

The radial load acts perpendicular
to the moving direction.

CASM-40-LS CASM-40-BS

CASM-40-BN

Ordering key

See page 18

Ordering key

Linear units

C A S M - 3 2 - B S - 0 3 0 0 A M - 0 0 0

Screw

LS Lead screw 9 × 1,5 mm
 BS Ball screw 10 × 3 mm
 BN Ball screw 10 × 10 mm

Stroke

50 mm
 100 mm
 150 mm
 200 mm
 300 mm
 400 mm

Option¹⁾

A Motor, adapter and accessories separately delivered
 M Motor, adapter and foot mountings²⁾ pre-mounted

Customer option

000 No option

C A S M - 4 0 - L S - 0 1 0 0 A A - 0 0 0

Screw

LS Lead screw 12,5 × 2,5 mm
 BS Ball screw 12 × 5 mm
 BN Ball screw 12,7 × 12,7 mm

Stroke

100 mm
 200 mm
 300 mm
 400 mm
 500 mm
 600 mm

Option¹⁾

A Motor, adapter and accessories separately delivered
 M Motor, adapter and foot mountings²⁾ pre-mounted

Customer option

000 No option

C A S M - 6 3 - B F - 0 7 0 0 A A - 0 0 0

Screw

LS Lead screw 20 × 4 mm
 BS Ball screw 20 × 5 mm
 BN Ball screw 20 × 10 mm
 BF Ball screw 20 × 20 mm

Stroke

100 mm
 200 mm
 300 mm
 400 mm
 500 mm
 600 mm
 700 mm
 800 mm

Option¹⁾

A Motor, adapter and accessories separately delivered
 M Motor, adapter and foot mountings²⁾ pre-mounted

Customer option

000 No option

¹⁾ Motor, adapter kit and accessories need to be ordered separately

²⁾ Foot mountings pre-mounted on inline version only

CASM-40-LS

Electric cylinder motor,
inline configuration



Technical data

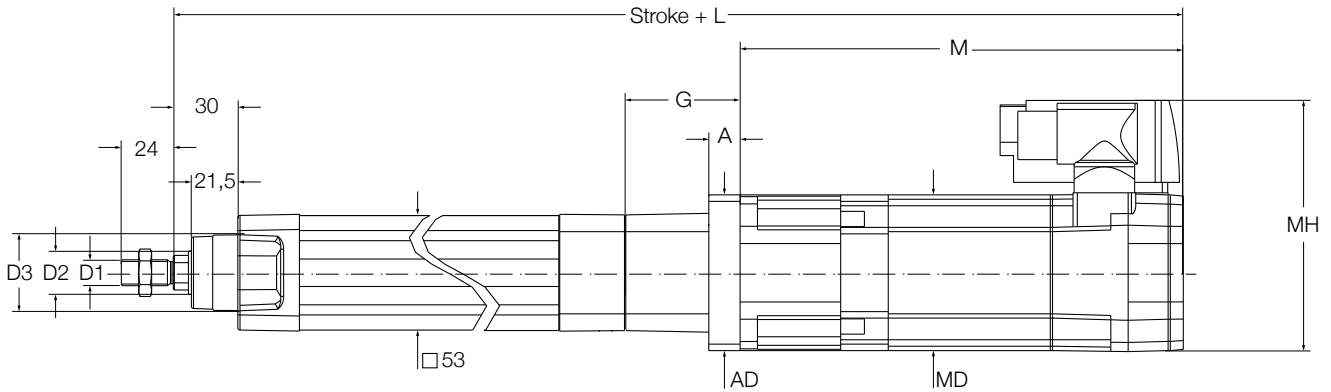
| Designation | Symbol | Unit | BLDC motor BG65S | Servo motor 1FK7022 |
|-----------------------------------|----------------|-----------------------------------|---------------------|------------------------|
| Performance Data | | | | |
| Continuous force @ zero speed | F_{c0} | kN | 0,600 | 0,600 |
| Continuous force @ max. speed | F_c | kN | 0,071 | 0,071 |
| Peak force @ zero speed | F_{p0} | kN | 0,600 | 0,600 |
| Peak force @ max. speed | F_p | kN | 0,600 | 0,600 |
| Dynamic load capacity | C | kN | N/A | N/A |
| Holding force (motorbrake option) | F_{Hold} | kN | – | – |
| Max. linear speed | v_{max} | mm/s | 70 | 70 |
| Max. acceleration | a_{max} | m/s ² | 1 | 1 |
| Duty cycle | D | % | 60 | 60 |
| Mechanical Data | | | | |
| Screw type | – | – | Lead screw | Lead screw |
| Screw diameter | d_{screw} | mm | 12,5 | 12,5 |
| Screw lead | p_{screw} | mm | 2,5 | 2,5 |
| Lead accuracy | – | – | N/A | N/A |
| Stroke | s | mm | 100...600 | 100...600 |
| Internal overstroke each side | s_0 | mm | 1 | 1 |
| Backlash | $s_{backlash}$ | mm | N/A | N/A |
| Gear reduction | i | – | 1 | 1 |
| Efficiency | η | % | 32 | 33 |
| Inertia @ 0 mm stroke | J | 10 ⁻⁴ kgm ² | 0,2612 | 0,4122 |
| Δ Inertia per 100 mm stroke | ΔJ | 10 ⁻⁴ kgm ² | 0,0123 | 0,0123 |
| Inertia of optional brake | J_{brake} | 10 ⁻⁴ kgm ² | 0,0000 | 0,0700 |
| Weight @ 0 mm stroke | m | kg | 3,22 | 3,35 |
| Δ weight per 100 mm stroke | Δm | kg | 0,46 | 0,46 |
| Weight of optional brake | m_{brake} | kg | 0,50 | 0,20 |
| Electrical Data | | | | |
| Motor type | – | – | Brushless DC | Servo |
| Nominal voltage | U | V DC | 40 | N/A |
| Nominal current | I | A | 7,0 | 1,4 |
| Peak current | I_{peak} | A | 20,0 | 1,8 |
| Nominal power | P | kW | 0,236 | 0,400 |
| Environment and Standards | | | | |
| Ambient temperature | $T_{ambient}$ | °C | 0...+50 | 0...+50 |
| Degree of protection | IP | – | 54S | 54S |
| Standards | – | – | ISO 15552 | ISO 15552 |

Ordering information

| | BG65 | 1FK7022 |
|-------------|--------------------|--------------------|
| Linear unit | see page 14 | see page 14 |
| Motor | BG65SX50PI | 1FK7022-5AK71-1UH3 |
| Adapter | ZBE-375571 | ZBE-375538 |

For more information regarding motors and motor adapters, please visit **page 5**

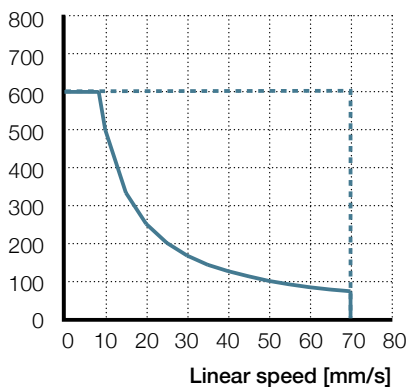
Dimensional drawing



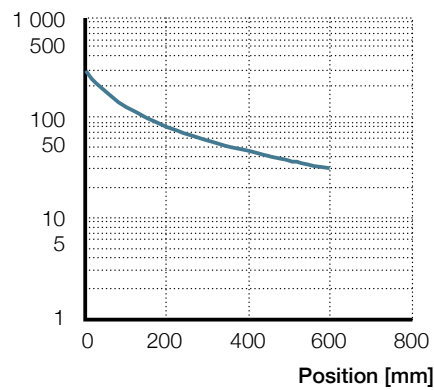
| Motor | D1 | D2 mm | D3 | L | G | A | AD | M | MD | MH |
|---------|------------|----------|-----|-------|------|----|----|-----|----|------|
| BG65S | M12 × 1,25 | Ø20 | Ø35 | 431 | 53,5 | 35 | 54 | 201 | 65 | 96,5 |
| 1FK7022 | M12 × 1,25 | Ø20 | Ø35 | 400,9 | 49,4 | 11 | 64 | 175 | 55 | 103 |

Performance diagrams

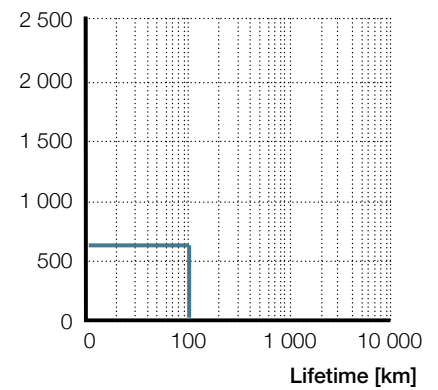
Axial force [N]



Radial load [N]



F_m [N]



BG65S – 1FK7022

— F_{cont} - - - F_{peak}

— CASM-40-LS

— CASM-40-LS

Ordering key

See page 60

CASM-40-LS

Electric cylinder motor,
parallel configuration



Technical data

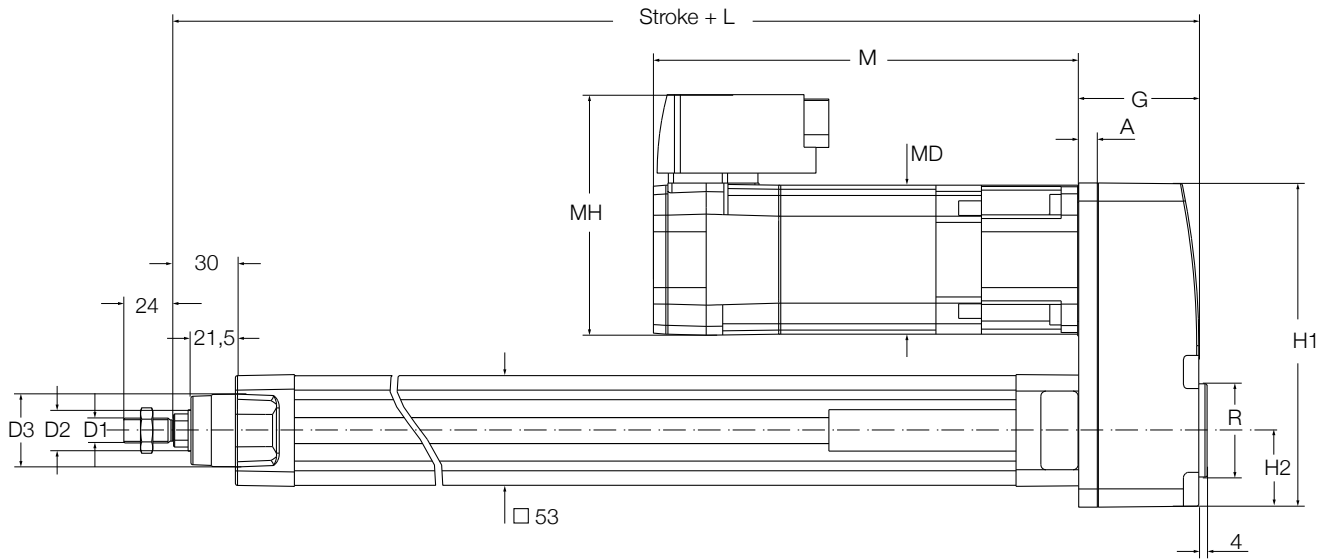
| Designation | Symbol | Unit | BLDC motor BG65S | Servo motor 1FK7022 |
|------------------------------------|----------------|-----------------------------------|---------------------|------------------------|
| Performance Data | | | | |
| Continuous force @ zero speed | F_{c0} | kN | 0,596 | 0,600 |
| Continuous force @ max. speed | F_c | kN | 0,071 | 0,071 |
| Peak force @ zero speed | F_{p0} | kN | 0,600 | 0,600 |
| Peak force @ max. speed | F_p | kN | 0,600 | 0,600 |
| Dynamic load capacity | C | kN | N/A | N/A |
| Holding force (motorbrake option) | F_{Hold} | kN | – | – |
| Max. linear speed | v_{max} | mm/s | 70 | 70 |
| Max. acceleration | a_{max} | m/s ² | 1 | 1 |
| Duty cycle | D | % | 60 | 60 |
| Mechanical Data | | | | |
| Screw type | – | – | Lead screw | Lead screw |
| Screw diameter | d_{screw} | mm | 12,5 | 12,5 |
| Screw lead | p_{screw} | mm | 2,5 | 2,5 |
| Lead accuracy | – | – | N/A | N/A |
| Stroke | s | mm | 100...600 | 100...600 |
| Internal overstroke each side | s_0 | mm | 1 | 1 |
| Backlash | $s_{backlash}$ | mm | N/A | N/A |
| Gear reduction | i | – | 1 | 1 |
| Efficiency | η | % | 32 | 32 |
| Inertia @ 0 mm stroke | J | 10 ⁻⁴ kgm ² | 0,2641 | 0,4151 |
| Δ Inertia per 100 mm stroke | ΔJ | 10 ⁻⁴ kgm ² | 0,0123 | 0,0123 |
| Inertia of optional brake | J_{brake} | 10 ⁻⁴ kgm ² | 0,0000 | 0,0700 |
| Weight @ 0 mm stroke | m | kg | 3,32 | 3,45 |
| Δ weight per 100 mm stroke | Δm | kg | 0,46 | 0,46 |
| Weight of optional brake | m_{brake} | kg | 0,50 | 0,20 |
| Electrical Data | | | | |
| Motor type | – | – | Brushless DC | Servo |
| Nominal voltage | U | V DC | 40 | N/A |
| Nominal current | I | A | 7,0 | 1,4 |
| Peak current | I_{peak} | A | 20,0 | 1,8 |
| Nominal power | P | kW | 0,236 | 0,400 |
| Environment and Standards | | | | |
| Ambient temperature | $T_{ambient}$ | °C | 0...+50 | 0...+50 |
| Degree of protection | IP | – | 54S | 54S |
| Standards | – | – | ISO 15552 | ISO 15552 |

Ordering information

| | BG65S | 1FK7022 |
|-------------|--------------------|--------------------|
| Linear unit | see page 14 | see page 14 |
| Motor | BG65SX50PI | 1FK7022-5AK71-1UH3 |
| Adapter | ZBE-375574 | ZBE-375546 |

For more information regarding motors and motor adapters, please visit **page 5**

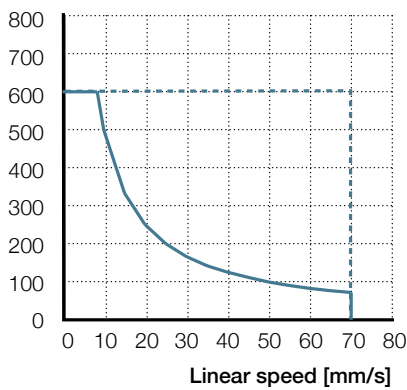
Dimensional drawing



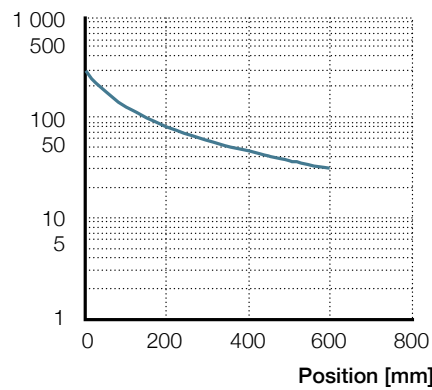
| Motor | D1 | D2 | D3 | L | G | A | H1 | H2 | M | MD | MH | R |
|---------|------------|-----|-----|-------|------|---|-------|------|-----|----|------|-----|
| | | mm | | | | | | | | | | |
| BG65S | M12 × 1,25 | Ø20 | Ø35 | 223 | 46,5 | 7 | 115,3 | 26,8 | 201 | 65 | 96,5 | Ø35 |
| 1FK7022 | M12 × 1,25 | Ø20 | Ø35 | 223,6 | 47,1 | 7 | 115,3 | 26,8 | 175 | 55 | 103 | Ø35 |

Performance diagrams

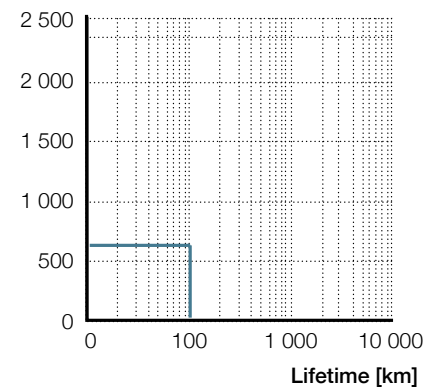
Axial force [N]



Radial load [N]



F_m [N]



BG65S – 1FK7022

— F_{cont} - - - F_{peak}

— CASM-40-LS

— CASM-40-LS

Ordering key

See page 60

CASM-40-BS

Electric cylinder motor,
inline configuration



Technical data

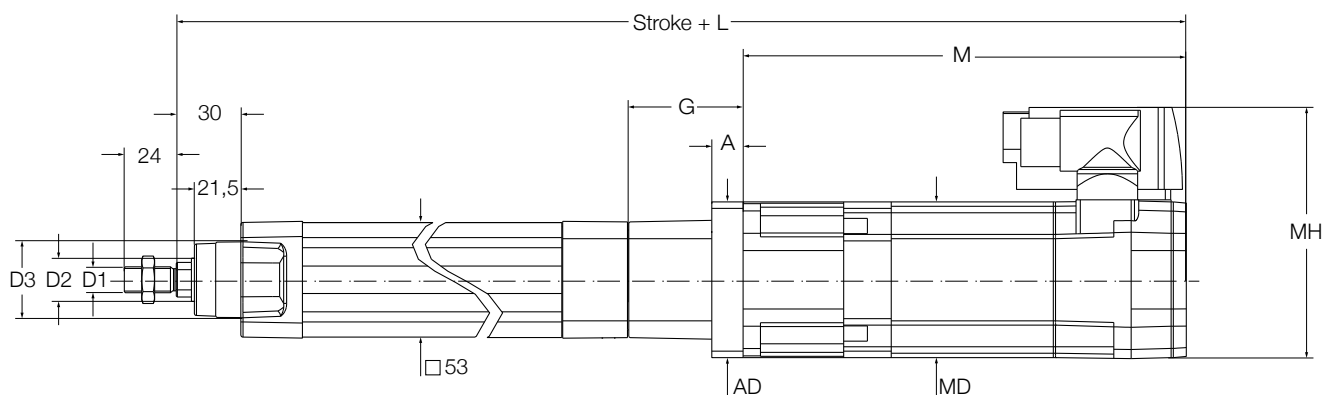
| Designation | Symbol | Unit | BLDC motor BG65S | BLDC motor BG75 | Servo motor 1FK7022 | Servo motor 1FK7034 |
|------------------------------------|----------------|-----------------------------------|---------------------|--------------------|------------------------|------------------------|
| Performance Data | | | | | | |
| Continuous force @ zero speed | F_{c0} | kN | 0,673 | 1,239 | 0,908 | 1,709 |
| Continuous force @ max. speed | F_c | kN | 0,673 | 1,239 | 0,758 | 1,485 |
| Peak force @ zero speed | F_{p0} | kN | 1,805 | 2,375 | 2,375 | 2,375 |
| Peak force @ max. speed | F_p | kN | 0,673 | 1,453 | 2,375 | 2,375 |
| Dynamic load capacity | C | kN | 4,8 | 4,8 | 4,8 | 4,8 |
| Holding force (motorbrake option) | F_{Hold} | kN | 1,478 | 1,478 | 1,478 | 2,375 |
| Max. linear speed | v_{max} | mm/s | 298 | 300 | 300 | 300 |
| Max. acceleration | a_{max} | m/s ² | 6 | 6 | 6 | 6 |
| Duty cycle | D | % | 100 | 100 | 100 | 100 |
| Mechanical Data | | | | | | |
| Screw type | – | – | Ball screw | Ball screw | Ball screw | Ball screw |
| Screw diameter | d_{screw} | mm | 12 | 12 | 12 | 12 |
| Screw lead | p_{screw} | mm | 5 | 5 | 5 | 5 |
| Lead accuracy | – | – | G7 | G7 | G7 | G7 |
| Stroke | s | mm | 100...600 | 100...600 | 100...600 | 100...600 |
| Internal overstroke each side | s_0 | mm | 1 | 1 | 1 | 1 |
| Backlash | $s_{backlash}$ | mm | 0,07 | 0,07 | 0,07 | 0,07 |
| Gear reduction | i | – | 1 | 1 | 1 | 1 |
| Efficiency | η | % | 72 | 77 | 73 | 75 |
| Inertia @ 0 mm stroke | J | 10 ⁻⁴ kgm ² | 0,2596 | 0,7826 | 0,4106 | 1,0306 |
| Δ Inertia per 100 mm stroke | ΔJ | 10 ⁻⁴ kgm ² | 0,0103 | 0,0103 | 0,0103 | 0,0103 |
| Inertia of optional brake | J_{brake} | 10 ⁻⁴ kgm ² | 0 | 0,0000 | 0,0700 | 0,1000 |
| Weight @ 0 mm stroke | m | kg | 3,23 | 4,36 | 3,36 | 5,06 |
| Δ weight per 100 mm stroke | Δm | kg | 0,46 | 0,46 | 0,46 | 0,46 |
| Weight of optional brake | m_{brake} | kg | 0,5 | 0,50 | 0,20 | 0,40 |
| Electrical Data | | | | | | |
| Motor type | – | – | Brushless DC | Brushless DC | Servo | Servo |
| Nominal voltage | U | V DC | 40 | 40 | N/A | N/A |
| Nominal current | I | A | 7 | 12,7 | 1,4 | 1,3 |
| Peak current | I_{peak} | A | 20 | 50,0 | 1,8 | 1,9 |
| Nominal power | P | kW | 0,236 | 0,450 | 0,400 | 0,600 |
| Environment and Standards | | | | | | |
| Ambient temperature | $T_{ambient}$ | °C | 0...+50 | 0...+50 | 0...+50 | 0...+50 |
| Degree of protection | IP | – | 54S | 54S | 54S | 54S |
| Standards | – | – | ISO 15554 | ISO 15555 | ISO 15556 | ISO 15557 |

Ordering information

| | BG65 | BG75 | 1FK7022 | 1FK7034 |
|-------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Linear unit | see page 14 | see page 14 | see page 14 | see page 14 |
| Motor | BG65SX50PI | BG75X75PI | 1FK7022-5AK71-1UH3 | 1FK7034-2AK71-1UH0 |
| Adapter | ZBE-375571 | ZBE-375579 | ZBE-375538 | ZBE-375545 |

For more information regarding motors and motor adapters, please visit [page 5](#)

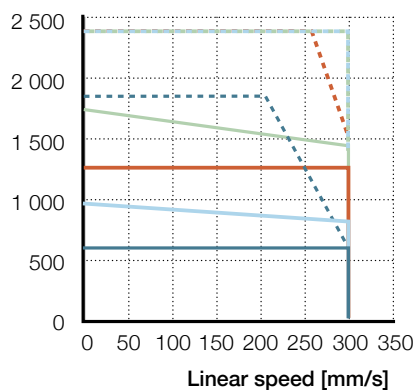
Dimensional drawing



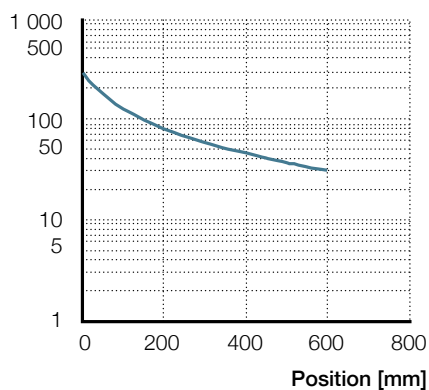
| Motor | D1 | D2 mm | D3 | L | G | A | AD | M | MD | MH |
|---------|------------|----------|-----|-------|------|----|----|-----|----|------|
| BG65S | M12 × 1,25 | Ø20 | Ø35 | 431 | 53,5 | 35 | 54 | 201 | 65 | 96,5 |
| BG75 | M12 × 1,25 | Ø20 | Ø35 | 462,9 | 52,4 | 14 | 75 | 234 | 75 | 100 |
| 1FK7022 | M12 × 1,25 | Ø20 | Ø35 | 400,9 | 49,4 | 11 | 64 | 175 | 55 | 103 |
| 1FK7034 | M12 × 1,25 | Ø20 | Ø35 | 428,9 | 52,4 | 14 | 72 | 200 | 72 | 117 |

Performance diagrams

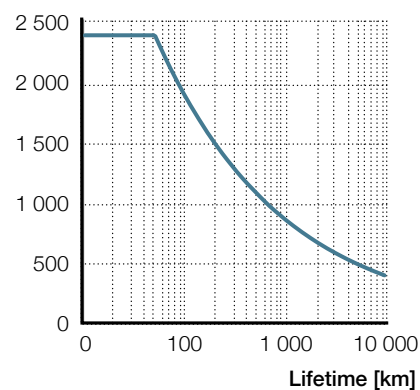
Axial force [N]



Radial load [N]



F_m [N]



| BG65S | BG75 | 1FK7022 | 1FK7034 |
|-------------------------|-------------------------|-------------------------|-------------------------|
| — F _{cont} | — F _{cont} | — F _{cont} | — F _{cont} |
| - - - F _{peak} | - - - F _{peak} | - - - F _{peak} | - - - F _{peak} |

— CASM-40-BS

— CASM-40-BS

Ordering key

See page 60

CASM-40-BS

Electric cylinder motor,
parallel configuration



Technical data

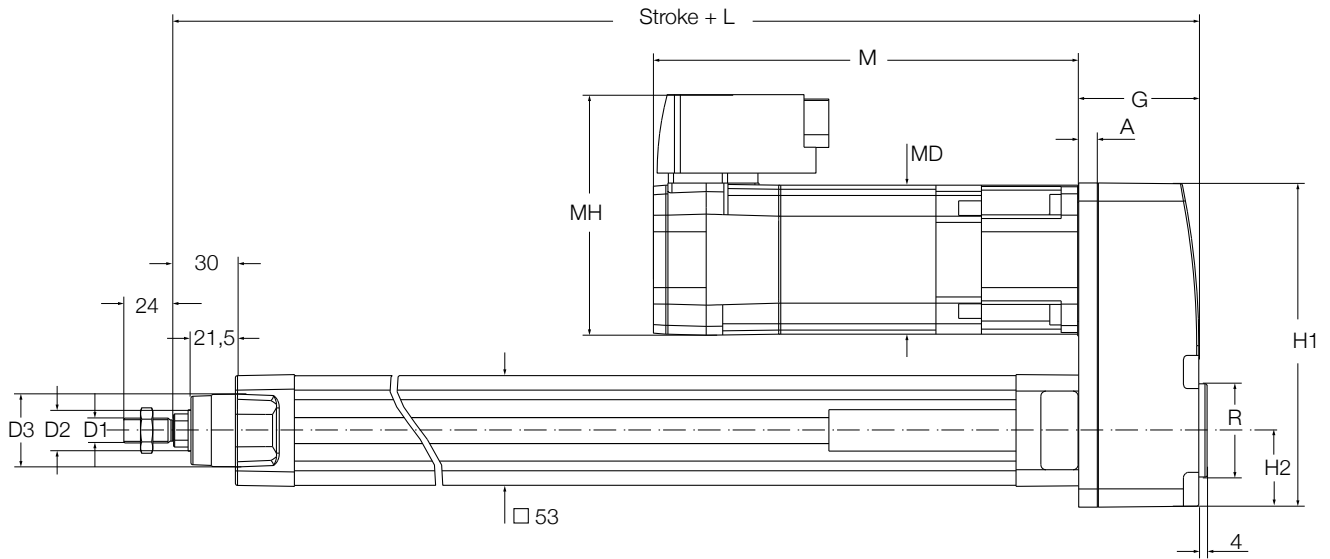
| Designation | Symbol | Unit | BLDC motor BG65S | BLDC motor BG75 | Servo motor 1FK7022 | Servo motor 1FK7034 |
|------------------------------------|----------------|-----------------------------------|---------------------|--------------------|------------------------|------------------------|
| Performance Data | | | | | | |
| Continuous force @ zero speed | F_{c0} | kN | 0,666 | 1,227 | 0,899 | 1,692 |
| Continuous force @ max. speed | F_c | kN | 0,666 | 1,227 | 0,751 | 1,47 |
| Peak force @ zero speed | F_{p0} | kN | 1,787 | 2,375 | 2,375 | 2,375 |
| Peak force @ max. speed | F_p | kN | 0,666 | 1,438 | 2,375 | 2,375 |
| Dynamic load capacity | C | kN | 4,8 | 4,8 | 4,8 | 4,8 |
| Holding force (motorbrake option) | F_{Hold} | kN | 1,478 | 1,478 | 1,478 | 2,375 |
| Max. linear speed | v_{max} | mm/s | 298 | 300 | 300 | 300 |
| Max. acceleration | a_{max} | m/s ² | 6 | 6 | 6 | 6 |
| Duty cycle | D | % | 100 | 100 | 100 | 100 |
| Mechanical Data | | | | | | |
| Screw type | – | – | Ball screw | Ball screw | Ball screw | Ball screw |
| Screw diameter | d_{screw} | mm | 12 | 12 | 12 | 12 |
| Screw lead | p_{screw} | mm | 5 | 5 | 5 | 5 |
| Lead accuracy | – | – | G7 | G7 | G7 | G7 |
| Stroke | s | mm | 100...600 | 100...600 | 100...600 | 100...600 |
| Internal overstroke each side | s_0 | mm | 1 | 1 | 1 | 1 |
| Backlash | $s_{backlash}$ | mm | 0,07 | 0,07 | 0,07 | 0,07 |
| Gear reduction | i | – | 1 | 1 | 1 | 1 |
| Efficiency | η | % | 72 | 76 | 72 | 74 |
| Inertia @ 0 mm stroke | J | 10 ⁻⁴ kgm ² | 0,2624 | 0,8314 | 0,4134 | 1,0794 |
| Δ Inertia per 100 mm stroke | ΔJ | 10 ⁻⁴ kgm ² | 0,0103 | 0,0103 | 0,0103 | 0,0103 |
| Inertia of optional brake | J_{brake} | 10 ⁻⁴ kgm ² | 0 | 0,0000 | 0,0700 | 0,1000 |
| Weight @ 0 mm stroke | m | kg | 3,33 | 4,51 | 3,46 | 5,21 |
| Δ weight per 100 mm stroke | Δm | kg | 0,46 | 0,46 | 0,46 | 0,46 |
| Weight of optional brake | m_{brake} | kg | 0,5 | 0,50 | 0,20 | 0,40 |
| Electrical Data | | | | | | |
| Motor type | – | – | Brushless DC | Brushless DC | Servo | Servo |
| Nominal voltage | U | V DC | 40 | 40 | N/A | N/A |
| Nominal current | I | A | 7 | 12,7 | 1,4 | 1,3 |
| Peak current | I_{peak} | A | 20 | 50,0 | 1,8 | 1,9 |
| Nominal power | P | kW | 0,236 | 0,450 | 0,400 | 0,600 |
| Environment and Standards | | | | | | |
| Ambient temperature | $T_{ambient}$ | °C | 0...+50 | 0...+50 | 0...+50 | 0...+50 |
| Degree of protection | IP | – | 54S | 54S | 54S | 54S |
| Standards | – | – | ISO 15558 | ISO 15559 | ISO 15560 | ISO 15561 |

Ordering information

| | BG65S | BG75 | 1FK7022 | 1FK7034 |
|-------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Linear unit | see page 14 | see page 14 | see page 14 | see page 14 |
| Motor | BG65SX50PI | BG75X75PI | 1FK7022-5AK71-1UH3 | 1FK7034-2AK71-1UH0 |
| Adapter | ZBE-375574 | ZBE-375578 | ZBE-375546 | ZBE-375603 |

For more information regarding motors and motor adapters, please visit [page 5](#)

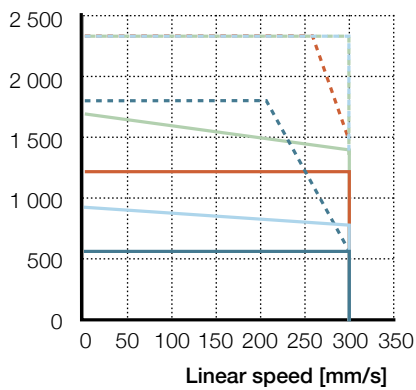
Dimensional drawing



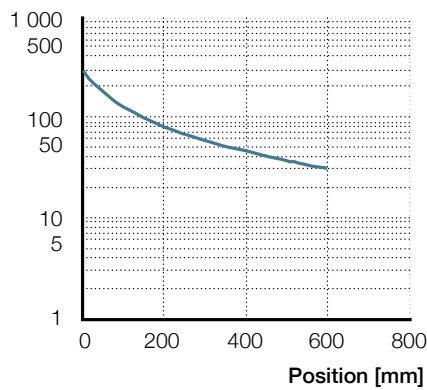
| Motor | D1 | D2 | D3 | L | G | A | H1 | H2 | M | MD | MH | R |
|---------|------------|-----|-----|-------|------|---|-------|-------|-----|----|------|-----|
| | | mm | | | | | | | | | | |
| BG65S | M12 × 1,25 | Ø20 | Ø35 | 223 | 46,5 | 7 | 115,3 | 26,8 | 201 | 65 | 96,5 | Ø35 |
| BG75 | M12 × 1,25 | Ø20 | Ø35 | 234,5 | 58 | 7 | 156,6 | 37,05 | 234 | 75 | 100 | Ø45 |
| 1FK7022 | M12 × 1,25 | Ø20 | Ø35 | 223,6 | 47,1 | 7 | 115,3 | 26,8 | 175 | 65 | 103 | Ø35 |
| 1FK7034 | M12 × 1,25 | Ø20 | Ø35 | 234,6 | 58,1 | 9 | 157,3 | 37,05 | 200 | 72 | 117 | Ø45 |

Performance diagrams

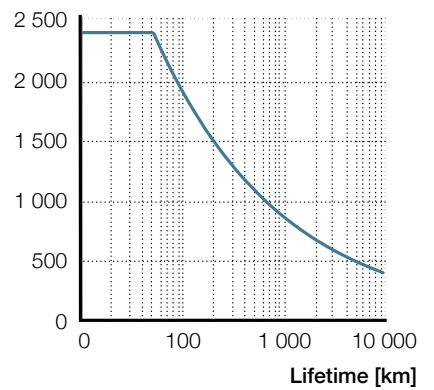
Axial force [N]



Radial load [N]



F_m [N]



| BG65S | BG75 | 1FK7022 | 1FK7034 |
|-------------------------|-------------------------|-------------------------|---------------------------|
| — F _{cont} | — F _{cont} | — F _{cont} | — F _{cont} |
| - - - F _{peak} | - - - F _{peak} | - - - F _{peak} | - - - F _{peak p} |

— CASM-40-BS

— CASM-40-BS

Ordering key

See page 60

CASM-40-BN

Electric cylinder motor,
inline configuration



Technical data

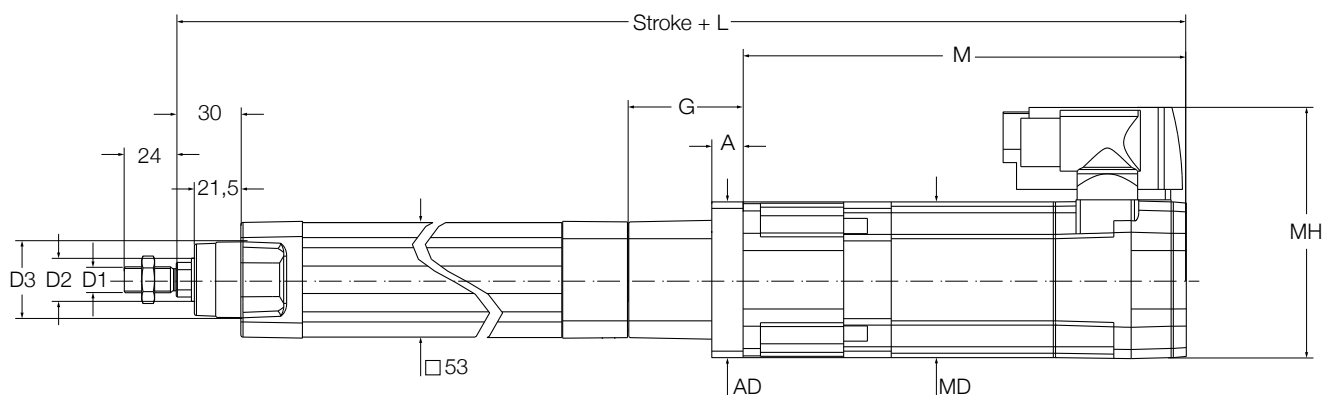
| Designation | Symbol | Unit | BLDC motor BG65S | BLDC motor BG75 | Servo motor 1FK7022 | Servo motor 1FK7034 |
|-----------------------------------|----------------|-----------------------------------|---------------------|--------------------|------------------------|------------------------|
| Performance Data | | | | | | |
| Continuous force @ zero speed | F_{c0} | kN | 0,268 | 0,494 | 0,362 | 0,681 |
| Continuous force @ max. speed | F_c | kN | 0,268 | 0,494 | 0,302 | 0,574 |
| Peak force @ zero speed | F_{p0} | kN | 0,719 | 1,550 | 1,447 | 1,550 |
| Peak force @ max. speed | F_p | kN | 0,268 | 0,494 | 1,447 | 1,550 |
| Dynamic load capacity | C | kN | 6 | 6 | 6 | 6 |
| Holding force (motorbrake option) | F_{Hold} | kN | 0,575 | 0,575 | 0,575 | 1,093 |
| Max. linear speed | v_{max} | mm/s | 756 | 783 | 826 | 826 |
| Max. acceleration | a_{max} | m/s ² | 6 | 6 | 6 | 6 |
| Duty cycle | D | % | 100 | 100 | 100 | 100 |
| Mechanical Data | | | | | | |
| Screw type | – | – | Ball screw | Ball screw | Ball screw | Ball screw |
| Screw diameter | d_{screw} | mm | 12,7 | 12,7 | 12,7 | 12,7 |
| Screw lead | p_{screw} | mm | 12,7 | 12,7 | 12,7 | 12,7 |
| Lead accuracy | – | – | G7 | G7 | G7 | G7 |
| Stroke | s | mm | 100...600 | 100...600 | 100...600 | 100...600 |
| Internal overstroke each side | s_0 | mm | 1 | 1 | 1 | 1 |
| Backlash | $s_{backlash}$ | mm | 0,07 | 0,07 | 0,07 | 0,07 |
| Gear reduction | i | – | 1 | 1 | 1 | 1 |
| Efficiency | η | % | 73 | 77 | 74 | 76 |
| Inertia @ 0 mm stroke | J | 10 ⁻⁴ kgm ² | 0,2629 | 0,7859 | 0,4139 | 1,0339 |
| Δ Inertia per 100 mm stroke | ΔJ | 10 ⁻⁴ kgm ² | 0,0144 | 0,0144 | 0,0144 | 0,0144 |
| Inertia of optional brake | J_{brake} | 10 ⁻⁴ kgm ² | 0 | 0,0000 | 0,0700 | 0,1000 |
| Weight @ 0 mm stroke | m | kg | 3,26 | 4,39 | 3,39 | 5,09 |
| Δ weight per 100 mm stroke | Δm | kg | 0,46 | 0,46 | 0,46 | 0,46 |
| Weight of optional brake | m_{brake} | kg | 0,5 | 0,50 | 0,20 | 0,4 |
| Electrical Data | | | | | | |
| Motor type | – | – | Brushless DC | Brushless DC | Servo | Servo |
| Nominal voltage | U | V DC | 40 | 40 | N/A | N/A |
| Nominal current | I | A | 7 | 12,7 | 1,4 | 1,3 |
| Peak current | I_{peak} | A | 20 | 50,0 | 1,8 | 1,9 |
| Nominal power | P | kW | 0,236 | 0,450 | 0,400 | 0,600 |
| Environment and Standards | | | | | | |
| Ambient temperature | $T_{ambient}$ | °C | 0...+50 | 0...+50 | 0...+50 | 0...+50 |
| Degree of protection | IP | – | 54S | 54S | 54S | 54S |
| Standards | – | – | ISO 15552 | ISO 15552 | ISO 15552 | ISO 15552 |

Ordering information

| | BG65S | BG75 | 1FK7022 | 1FK7034 |
|-------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Linear unit | see page 14 | see page 14 | see page 14 | see page 14 |
| Motor | BG65SX50PI | BG75X75PI | 1FK7022-5AK71-1UH3 | 1FK7034-2AK71-1UH0 |
| Adapter | ZBE-375571 | ZBE-375579 | ZBE-375538 | ZBE-375545 |

For more information regarding motors and motor adapters, please visit [page 5](#)

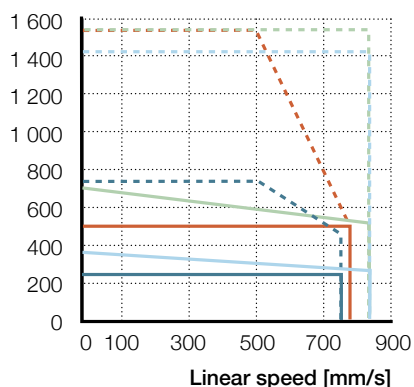
Dimensional drawing



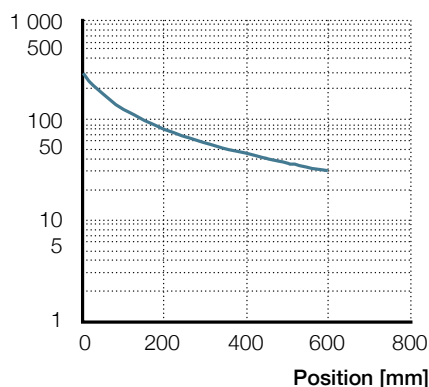
| Motor | D1 | D2 | D3 | L | G | A | AD | M | MD | MH |
|---------|------------|-----|-----|-------|------|----|----|-----|----|------|
| | | mm | | | | | | | | |
| BG65S | M12 × 1,25 | Ø20 | Ø35 | 431 | 53,5 | 35 | 54 | 201 | 65 | 96,5 |
| BG75 | M12 × 1,25 | Ø20 | Ø35 | 462,9 | 52,4 | 14 | 75 | 234 | 75 | 100 |
| 1FK7022 | M12 × 1,25 | Ø20 | Ø35 | 400,9 | 49,4 | 11 | 64 | 175 | 55 | 103 |
| 1FK7034 | M12 × 1,25 | Ø20 | Ø35 | 428,9 | 52,4 | 14 | 72 | 200 | 72 | 117 |

Performance diagrams

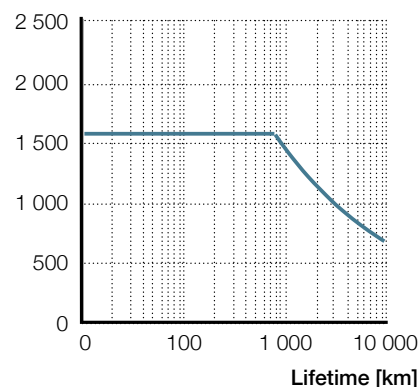
Axial force [N]



Radial load [N]



F_m [N]



| BG65S | BG75 | 1FK7022 | 1FK7034 |
|-------------------------|-------------------------|-------------------------|-------------------------|
| — F _{cont} | — F _{cont} | — F _{cont} | — F _{cont} |
| - - - F _{peak} | - - - F _{peak} | - - - F _{peak} | - - - F _{peak} |

— CASM-40-BN

— CASM-40-BN

Ordering key

See page 60

CASM-40-BN

Electric cylinder motor,
parallel configuration



Technical data

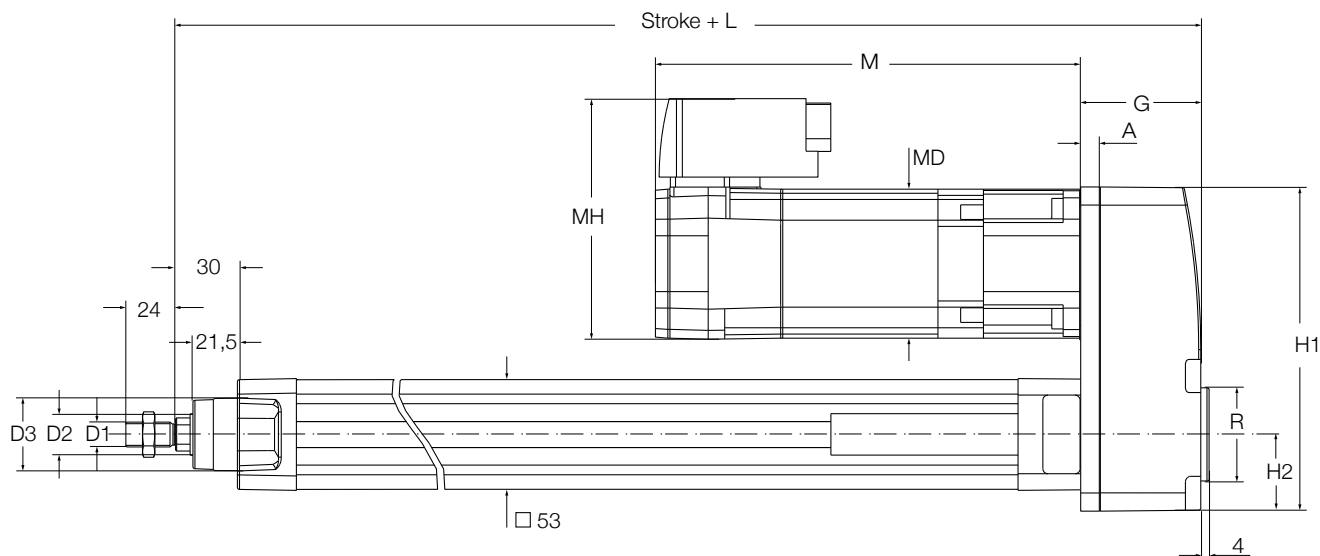
| Designation | Symbol | Unit | BLDC motor BG65S | BLDC motor BG75 | Servo motor 1FK7022 | Servo motor 1FK7034 |
|------------------------------------|----------------|-----------------------------------|---------------------|--------------------|------------------------|------------------------|
| Performance Data | | | | | | |
| Continuous force @ zero speed | F_{c0} | kN | 0,265 | 0,489 | 0,358 | 0,674 |
| Continuous force @ max. speed | F_c | kN | 0,265 | 0,489 | 0,299 | 0,569 |
| Peak force @ zero speed | F_{p0} | kN | 0,712 | 1,276 | 1,276 | 1,276 |
| Peak force @ max. speed | F_p | kN | 0,265 | 0,489 | 1,276 | 1,276 |
| Dynamic load capacity | C | kN | 6 | 6 | 6 | 6 |
| Holding force (motorbrake option) | F_{Hold} | kN | 0,575 | 0,575 | 0,575 | 1,093 |
| Max. linear speed | v_{max} | mm/s | 756 | 783 | 826 | 826 |
| Max. acceleration | a_{max} | m/s ² | 6 | 6 | 6 | 6 |
| Duty cycle | D | % | 100 | 100 | 100 | 100 |
| Mechanical Data | | | | | | |
| Screw type | – | – | Ball screw | Ball screw | Ball screw | Ball screw |
| Screw diameter | d_{screw} | mm | 12,7 | 12,7 | 12,7 | 12,7 |
| Screw lead | p_{screw} | mm | 12,7 | 12,7 | 12,7 | 12,7 |
| Lead accuracy | – | – | G7 | G7 | G7 | G7 |
| Stroke | s | mm | 100...600 | 100...600 | 100...600 | 100...600 |
| Internal overstroke each side | s_0 | mm | 1 | 1 | 1 | 1 |
| Backlash | $s_{backlash}$ | mm | 0,07 | 0,07 | 0,07 | 0,07 |
| Gear reduction | i | – | 1 | 1 | 1 | 1 |
| Efficiency | η | % | 72 | 77 | 73 | 75 |
| Inertia @ 0 mm stroke | J | 10 ⁻⁴ kgm ² | 0,2657 | 0,8347 | 0,4167 | 1,0827 |
| Δ Inertia per 100 mm stroke | ΔJ | 10 ⁻⁴ kgm ² | 0,0144 | 0,0144 | 0,0144 | 0,0144 |
| Inertia of optional brake | J_{brake} | 10 ⁻⁴ kgm ² | 0 | 0,0000 | 0,0700 | 0,1000 |
| Weight @ 0 mm stroke | m | kg | 3,36 | 4,54 | 3,49 | 5,24 |
| Δ weight per 100 mm stroke | Δm | kg | 0,46 | 0,46 | 0,46 | 0,46 |
| Weight of optional brake | m_{brake} | kg | 0,5 | 0,50 | 0,20 | 0,40 |
| Electrical Data | | | | | | |
| Motor type | – | – | Brushless DC | Brushless DC | Servo | Servo |
| Nominal voltage | U | V DC | 40 | 40 | N/A | N/A |
| Nominal current | I | A | 7 | 12,7 | 1,4 | 1,3 |
| Peak current | I_{peak} | A | 20 | 50,0 | 1,8 | 1,9 |
| Nominal power | P | kW | 0,236 | 0,450 | 0,400 | 0,600 |
| Environment and Standards | | | | | | |
| Ambient temperature | $T_{ambient}$ | °C | 0...+50 | 0...+50 | 0...+50 | 0...+50 |
| Degree of protection | IP | – | 54S | 54S | 54S | 54S |
| Standards | – | – | ISO 15552 | ISO 15552 | ISO 15552 | ISO 15552 |

Ordering information

| | BG65S | BG75 | 1FK7022 | 1FK7034 |
|-------------|-------------|-------------|--------------------|--------------------|
| Linear unit | see page 14 | see page 14 | see page 14 | see page 14 |
| Motor | BG65SX50PI | BG75X75PI | 1FK7022-5AK71-1UH3 | 1FK7034-2AK71-1UH0 |
| Adapter | ZBE-375574 | ZBE-375578 | ZBE-375546 | ZBE-375603 |

For more information regarding motors and motor adapters, please visit [page 5](#)

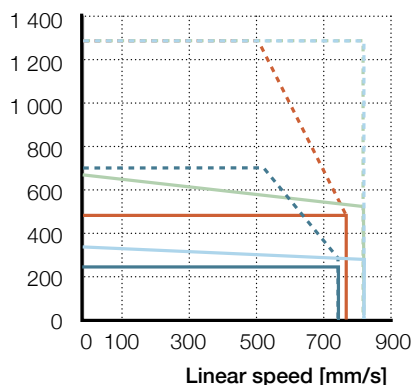
Dimensional drawing



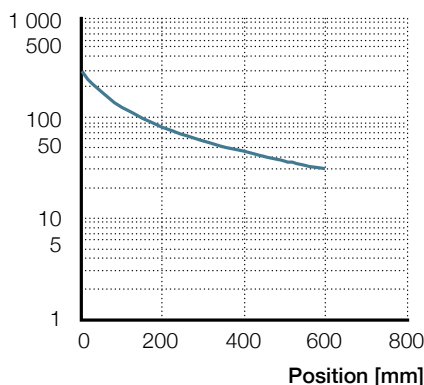
| Motor | D1 | D2 | D3 | L | G | A | H1 | H2 | M | MD | MH | R |
|---------|------------|-----|-----|-------|------|---|-------|-------|-----|----|------|-----|
| | | mm | | | | | | | | | | |
| BG65S | M12 × 1,25 | Ø20 | Ø35 | 223 | 46.5 | 7 | 115,3 | 26,8 | 201 | 65 | 96,5 | Ø35 |
| BG75 | M12 × 1,25 | Ø20 | Ø35 | 234,5 | 58 | 7 | 156,6 | 37,05 | 234 | 75 | 100 | Ø45 |
| 1FK7022 | M12 × 1,25 | Ø20 | Ø35 | 223,6 | 47.1 | 7 | 115,3 | 26,8 | 175 | 55 | 103 | Ø35 |
| 1FK7034 | M12 × 1,25 | Ø20 | Ø35 | 234,6 | 58.1 | 9 | 157,3 | 37,05 | 200 | 72 | 117 | Ø45 |

Performance diagrams

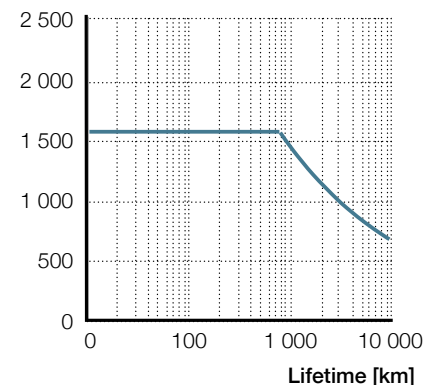
Axial force [N]



Radial load [N]



F_m [N]



| BG65S | BG75 | 1FK7022 | 1FK7034 |
|-------------------------|-------------------------|-------------------------|-------------------------|
| — F _{cont} | — F _{cont} | — F _{cont} | — F _{cont} |
| - - - F _{peak} | - - - F _{peak} | - - - F _{peak} | - - - F _{peak} |

— CASM-40-BN

— CASM-40-BN

Ordering key

See page 60

Ordering key

Linear units

C A S M - 3 2 - B S - 0 3 0 0 A M - 0 0 0

Screw

LS Lead screw 9 × 1,5 mm
 BS Ball screw 10 × 3 mm
 BN Ball screw 10 × 10 mm

Stroke

50 mm
 100 mm
 150 mm
 200 mm
 300 mm
 400 mm

Option¹⁾

A Motor, adapter and accessories separately delivered
 M Motor, adapter and foot mountings²⁾ pre-mounted

Customer option

000 No option

C A S M - 4 0 - L S - 0 1 0 0 A A - 0 0 0

Screw

LS Lead screw 12,5 × 2,5 mm
 BS Ball screw 12 × 5 mm
 BN Ball screw 12,7 × 12,7 mm

Stroke

100 mm
 200 mm
 300 mm
 400 mm
 500 mm
 600 mm

Option¹⁾

A Motor, adapter and accessories separately delivered
 M Motor, adapter and foot mountings²⁾ pre-mounted

Customer option

000 No option

C A S M - 6 3 - B F - 0 7 0 0 A A - 0 0 0

Screw

LS Lead screw 20 × 4 mm
 BS Ball screw 20 × 5 mm
 BN Ball screw 20 × 10 mm
 BF Ball screw 20 × 20 mm

Stroke

100 mm
 200 mm
 300 mm
 400 mm
 500 mm
 600 mm
 700 mm
 800 mm

Option¹⁾

A Motor, adapter and accessories separately delivered
 M Motor, adapter and foot mountings²⁾ pre-mounted

Customer option

000 No option

¹⁾ Motor, adapter kit and accessories need to be ordered separately

²⁾ Foot mountings pre-mounted on inline version only