DINGS'

Precision Motion Specialist

# DLM · LR-DLM SERIES

## PRODUCT CATALOG

Jiangsu DINGS' Intelligent Control Technology Co., Ltd.

dingsmotion.com

Founded in 2008, Jiangsu DINGS' Intelligent Control Technology Co., Ltd. is guided by the philosophy, **"Quality stems from responsibility, and details determine success."**

As a global leader in precision linear motion, DINGS' delivers a comprehensive portfolio of precision stepper, DC and BLDC motors, voice coil motors, lead and ball screw linear actuators, PMSM motors for eco-mobility, and advanced motion controllers — setting new benchmarks in the global motion control market.

## SCALE

| | | |
|---|---|---|
| 300+ | Advanced Machining Equipment | |
| 40+ | Automated Assembly Lines | |
| 100+ | Precision Testing & Analysis Systems | |
| 140+ | Patents & Intellectual Properties | |

## GROWTH

| | |
|---|---|
| 2008 | Company Founded & DINGS' Brand Established |
| 2010 | DINGS' Motion USA Established |
| 2016 | DINGS' Korea Established |
| 2019 | Joined LEILI Group |
| 2021 | Changzhou Intelligent Manufacturing Plant Established<br>Listed on China NEEQ Market |
| 2022 | Korea R&D Center Established |
| 2023 | Listed on Beijing Stock Exchange [Stock Code: 920593]<br>DINGS' Korea Converted to Corporate Entity<br>DINGS' Japan Established |
| 2024 | New Headquarters & Plant Established<br>DINGS' Motion Europe Established |
| 2025 | Thailand Manufacturing Facility Established |
| 2026 | DINGS' Motion Europe Austria Branch Established |

## CERTIFICATIONS

ISO 9001 — Quality

ISO 14001 — Environmental

ISO 45001 — Health & Safety

ISO 13485 — Medical Device Quality

ISO/IEC 17025 — Laboratory Accreditation

IATF16949 — Automotive Quality

IPMS — Intellectual Property

CE — Safety Standards

RoHS COMPLIANT — Environmental Standards - RoHS

REACH NPS — Environmental Standards - REACH

## PRODUCT WARRANTY

Warranty period: 1 year from shipment.

Free repair is provided for defects in materials or workmanship under normal use.

Warranty does not apply to:

- Warranty expiration or damaged/lost nameplates
- Improper installation or operating conditions
- Unauthorized disassembly or modification
- Repairs conducted outside of official service channels
- Force majeure, including natural disasters

DINGS' is committed to quality, reliability, and responsibility

— delivering high-performance motion solutions built on precision engineering.

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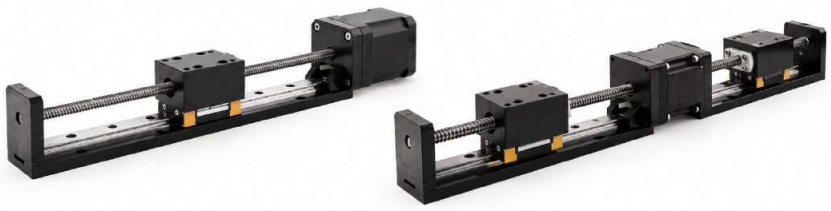
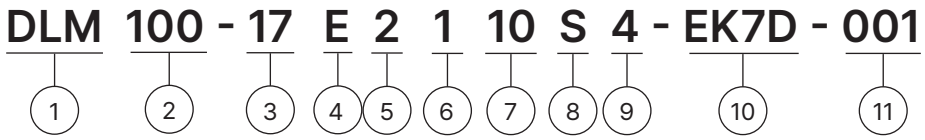


# Part number construction - DLM series




① Product Name
DLM Series Module

② Stroke (mm)
100 = 100mm

③ Motor Size

| Motor Size (mm) | 14 | 20 | 28 | 35 | 42 | 57 |
|---|---|---|---|---|---|---|
| Motor Size (NEMA) | 6 | 8 | 11 | 14 | 17 | 23 |

④ Motor Type
E = External type
N = Non-Captive type

⑤ Motor Step Angle
2 = 2-phase, 1.8° step angle
4 = 2-phase, 0.9° step angle

⑥ Motor Length
1 = Single stack
2 = Double stack

⑦ Rated Current / Phase
XX = X.X (A) / Phase

⑧ Lead Screw Code
Please refer to the lead screw code selection table

⑨ Number of Lead Wires
4 = 4-wire leads
6 = 6-wire leads

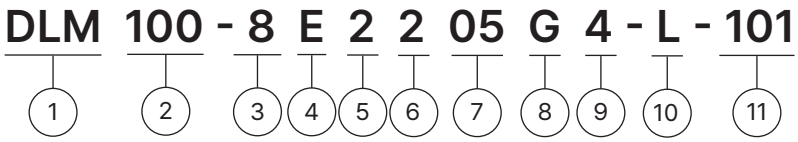
⑩ Option
EKX = Encoder [X = Encoder Resolution]
P = Manual knob
B = Brake
X = Rear shaft
R = Encoder ready
C = Customization
N = No rear-end machining

⑪ Customer Sequence Number

Example

| | |
|---|---|
| Part Number | DLM100-17E2110S4-EK7D-001 |
| Description | DLM Linear Module<br>100mm Stroke<br>NEMA 17 External Linear Actuator<br>2-phase / 1.8° Stepper<br>Single Stack<br>1.0A / Phase<br>S Lead (0.25" or 6.35mm)<br>4-wire leads<br>EK7D Encoder with differential output 1,000 lines<br>Serial Number 001 |

# Part number construction - LR-DLM series




① Product Name
LR DLM Series Module

② Stroke (mm)
100 = 100mm

③ Motor Size

| Motor Size (mm) | 20 | 28 | 35 | 42 | 57 |
|---|---|---|---|---|---|
| Motor Size (NEMA) | 8 | 11 | 14 | 17 | 23 |

④ Motor Type
E = External type

⑤ Motor Step Angle
2 = 2-phase, 1.8° step angle
4 = 2-phase, 0.9° step angle

⑥ Motor Length
1 = Single stack
2 = Double stack

⑦ Rated Current / Phase
XX = X.X (A) / Phase

⑧ Lead Screw Code
Please refer to the lead screw code selection table

⑨ Number of Lead Wires
4 = 4-wire leads
6 = 6-wire leads

⑩ LR DLM
"L" indicates the LR-DLM series

⑪ Customer Sequence Number

Example

| | |
|---|---|
| Part Number | DLM100-8E2205G4-L-001 |
| Description | LR DLM Linear Module<br>100mm Stroke<br>NEMA 8 External Linear Actuator<br>2-phase / 1.8° Stepper<br>Double Stack<br>0.5A / Phase<br>G Lead (0.0787" or 2.0mm)<br>4-wire leads<br>LR DLM<br>Serial Number 001 |

# 14mm DLM

Based on DINGS' high-precision lead screw linear actuator platform and self-developed compact linear module structure, the DLM 14mm series provides compact, reliable, and high-precision linear motion solutions.

The DLM 14mm series offers a wide range of stroke and lead options with extensive customization capabilities, enabling integrated customized solutions for various applications.

## Motor Characteristics

| Motor | Voltage (V) | Current (A [RMS]) | Resistance (Ω) | Inductance (mH) | Weight (g) | Lead Wire No. | Motor Length (mm) |
|---|---|---|---|---|---|---|---|
| 6-2103 | 6.6 | 0.25 | 22 | 4.5 | 60 | 4 | 32 |

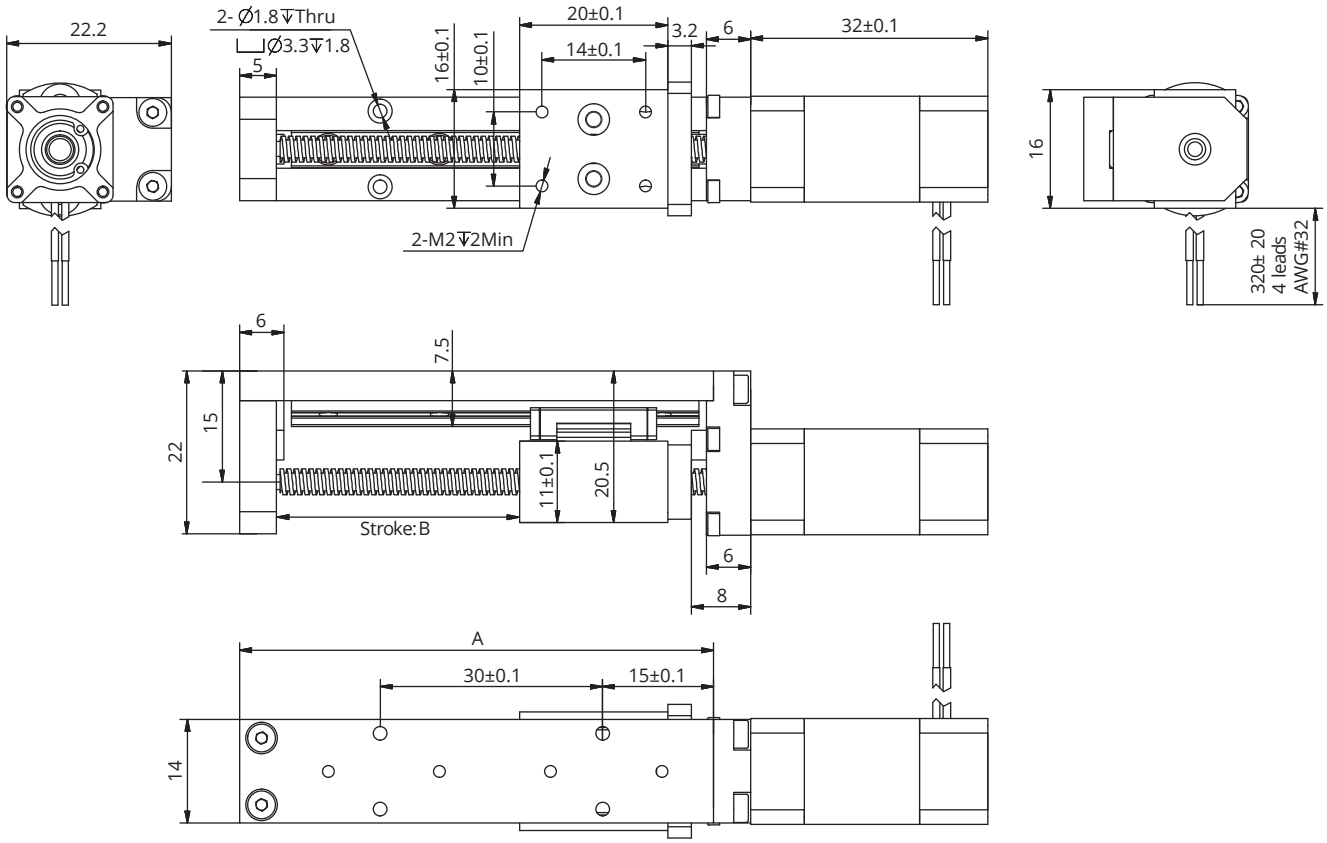
## Available Lead Screw and Travel per Step

| Screw Dia. (inch) | Screw Dia. (mm) | Lead (inch) | Lead (mm) | Lead Code | Travel Per Step @1.8° (mm)* |
|---|---|---|---|---|---|
| 0.138 | 3.5 | 0.0118 | 0.3 | AF | 0.0015 |
| 0.138 | 3.5 | 0.024 | 0.6096 | AA | 0.003048 |
| 0.138 | 3.5 | 0.048 | 1.2192 | B | 0.006096 |
| 0.138 | 3.5 | 0.0787 | 2 | G | 0.01 |
| 0.138 | 3.5 | 0.1575 | 4 | M | 0.02 |
| 0.138 | 3.5 | 0.315 | 8 | T | 0.04 |

## Mechanical Specifications

| Model | C100B(dyn)(N) | Co(stat)(N) | Mro(Nm) | Mpo(Nm) | Myo(Nm) |
|---|---|---|---|---|---|
| DLM / LR-DLM 14 | 231 | 385 | 1.176 | 0.693 | 0.693 |

## Dimensional Drawings




## Available Stroke Selection

| Size A (mm) | Stroke B (mm) | Weight (kg) | |
|---|---|---|---|
| | | Single stack | Double stack |
| 60 | 20 | 0.096 | - |
| 80 | 40 | 0.103 | - |
| 100 | 60 | 0.109 | - |
| 120 | 80 | 0.116 | - |
| 140 | 100 | 0.122 | - |

* Weight values are for reference only and may vary with actual configuration.

Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

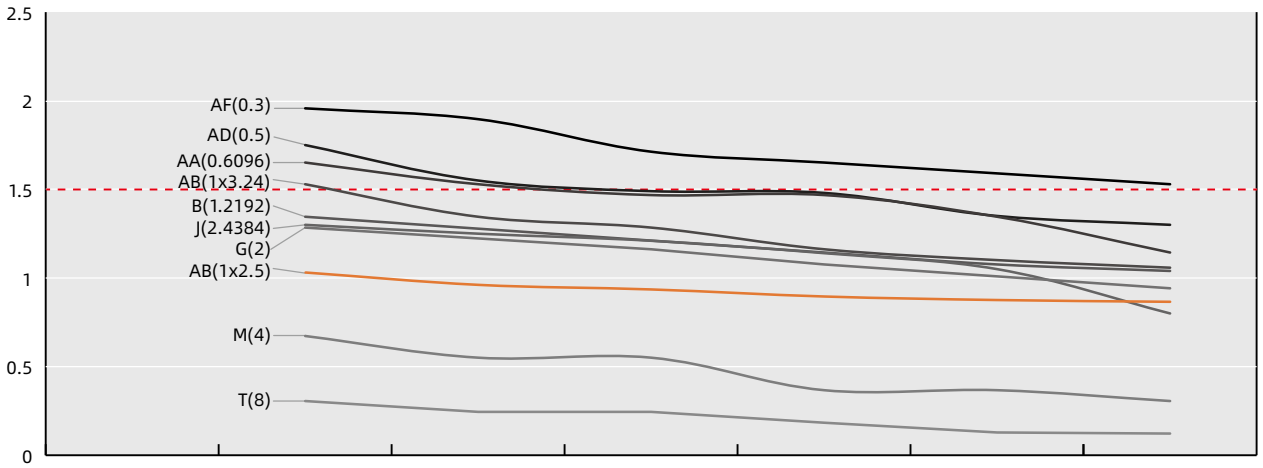
# 14mm DLM

## Speed Thrust Curves

Size 6 Single Stack Speed Thrust Curves

kg ※Bipolar chopper constant current drive operating current 0.25A (RMS)

(Recommended Load Limit 1.5kg)




| | | | | | | |
|---|---|---|---|---|---|---|
| T(mm/s) | 8 | 24 | 40 | 60 | 80 | 100 |
| M(mm/s) | 4 | 12 | 20 | 30 | 40 | 50 |
| J(mm/s) | 2.4384 | 7.3152 | 14.6304 | 18.288 | 24.384 | 30.48 |
| G(mm/s) | 2 | 6 | 10 | 15 | 20 | 25 |
| B(mm/s) | 1.2192 | 3.6576 | 6.096 | 9.144 | 12.192 | 15.24 |
| AB(mm/s) | 1 | 3 | 5 | 7.5 | 10 | 12.5 |
| AA(mm/s) | 0.6096 | 1.8288 | 3.048 | 4.572 | 6.096 | 7.62 |
| AD(mm/s) | 0.5 | 1.5 | 3 | 3.75 | 5 | 6.25 |
| AF(mm/s) | 0.3 | 0.9 | 1.5 | 2.25 | 3 | 3.75 |
| Speed r/min | 60 | 180 | 360 | 450 | 600 | 750 |
| Pulse pps | 200 | 600 | 1000 | 1500 | 2000 | 2500 |

**TEST CONDITION**

Testing Voltage: 24Vdc, Driver Model: DS-OLS2-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

# 20mm DLM / LR-DLM

Based on DINGS' high-precision lead screw linear actuator platform and self-developed compact linear module structure, the DLM and LR-DLM 20mm series provide compact, reliable, and high-precision linear motion solutions.

The DLM and LR-DLM 20mm series offer a wide range of stroke and lead options with extensive customization capabilities, enabling integrated customized solutions for various applications.

## Motor Characteristics

| Motor | Voltage (V) | Current (A [RMS]) | Resistance (Ω) | Inductance (mH) | Lead wires | Motor length (mm) |
|---|---|---|---|---|---|---|
| 8E2105 | 2.5 | 0.5 | 5.1 | 1.5 | 4 | 27.2 |
| 8E2205 | 4.4 | 0.5 | 8.8 | 2.7 | 4 | 38.1 |

## Available Lead Screw and Travel per Step

| Screw Dia. (inch) | Screw Dia. (mm) | Lead (inch) | Lead (mm) | Lead Code | Travel Per Step @1.8° (mm)* |
|---|---|---|---|---|---|
| 0.138 | 3.5 | 0.0118 | 0.3 | AF | 0.0015 |
| 0.138 | 3.5 | 0.024 | 0.6096 | AA | 0.003048 |
| 0.128 | 3.24 | 0.0394 | 1 | AB | 0.005 |
| 0.138 | 3.5 | 0.048 | 1.2192 | B | 0.006096 |
| 0.138 | 3.5 | 0.0787 | 2 | G* | 0.01 |
| 0.138 | 3.5 | 0.096 | 2.4384 | J | 0.012192 |
| 0.138 | 3.5 | 0.1575 | 4 | M | 0.02 |
| 0.138 | 3.5 | 0.315 | 8 | T | 0.04 |

* Lead code G is only available for LR-DLM 20mm

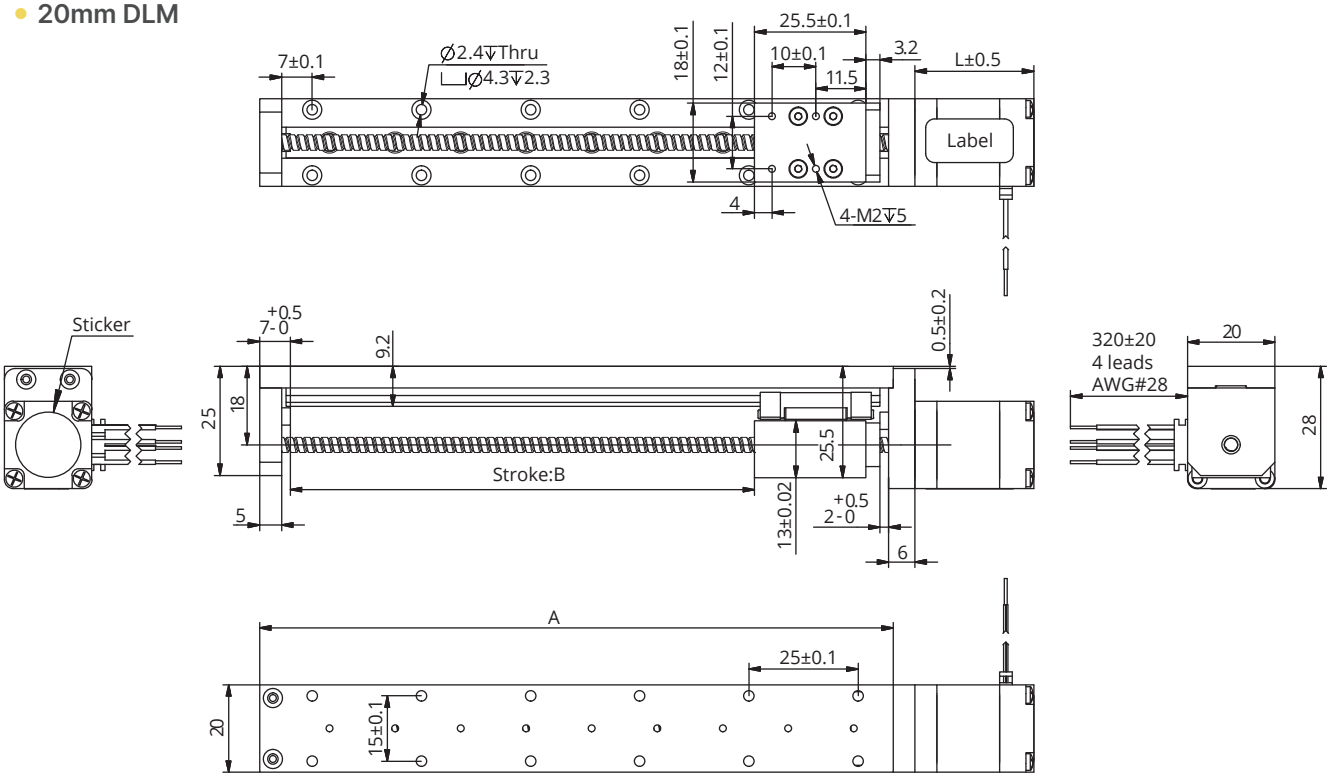
## Mechanical Specifications

| Model | C100B(dyn)(N) | Co(stat)(N) | Mro(Nm) | Mpo(Nm) | Myo(Nm) |
|---|---|---|---|---|---|
| DLM / LR-DLM 20 | 714 | 1071 | 3.794 | 2.219 | 2.219 |

# 20mm DLM / LR-DLM

## Dimensional Drawings

### 20mm DLM



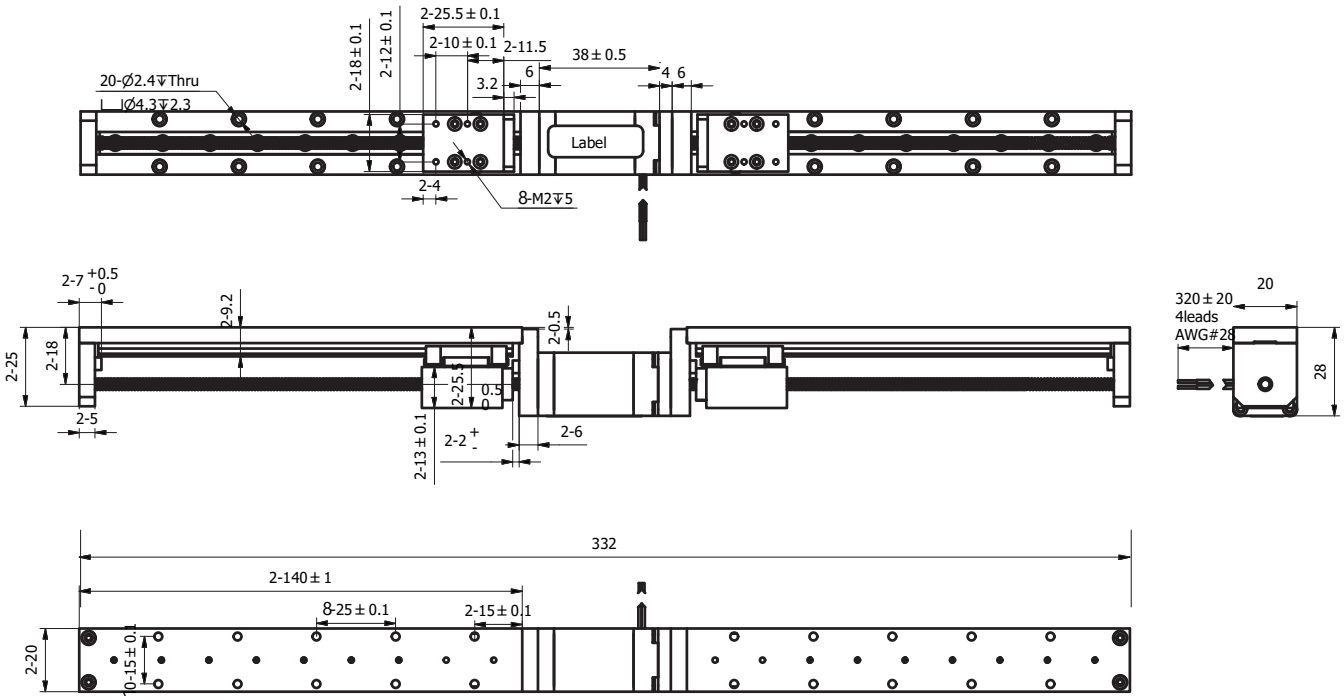

### Available Stroke Selection

| Size A (mm) | Stroke B (mm) | Weight (kg) | |
|---|---|---|---|
| | | Single stack | Double stack |
| 60 | 20 | 0.124 | 0.147 |
| 80 | 40 | 0.134 | 0.157 |
| 100 | 60 | 0.144 | 0.167 |
| 120 | 80 | 0.155 | 0.177 |
| 140 | 100 | 0.166 | 0.189 |
| 190 | 150 | 0.192 | 0.215 |
| 240 | 200 | 0.217 | 0.24 |

* Weight values are for reference only and may vary with actual configuration.

Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

## 20mm LR-DLM




## Available Stroke Selection

| Stroke (mm) | Single stack | | Double stack | |
|---|---|---|---|---|
| | Total Length (mm) | Weight (kg) | Total Length (mm) | Weight (kg) |
| 20 | 161.2 | 0.154 | 172.1 | 0.177 |
| 40 | 201.2 | 0.174 | 212.1 | 0.197 |
| 60 | 241.2 | 0.194 | 252.1 | 0.217 |
| 80 | 281.2 | 0.214 | 292.1 | 0.237 |
| 100 | 321.2 | 0.234 | 332.1 | 0.257 |
| 150 | 421.2 | 0.284 | 432.1 | 0.307 |
| 200 | 521.2 | 0.334 | 532.1 | 0.357 |

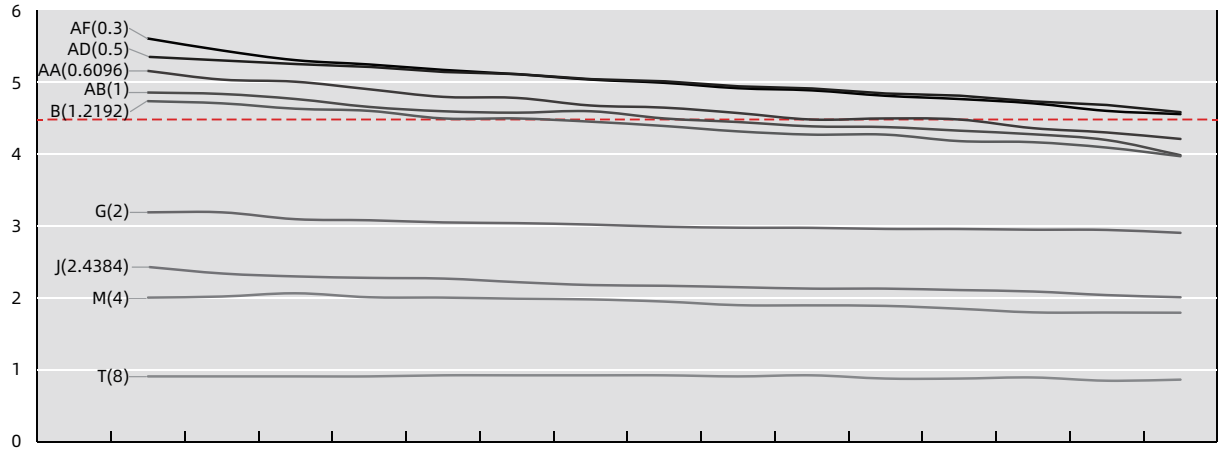
Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

# 20mm DLM / LR-DLM

## Speed Thrust Curves

### Size 8 Single Stack Speed Thrust Curves

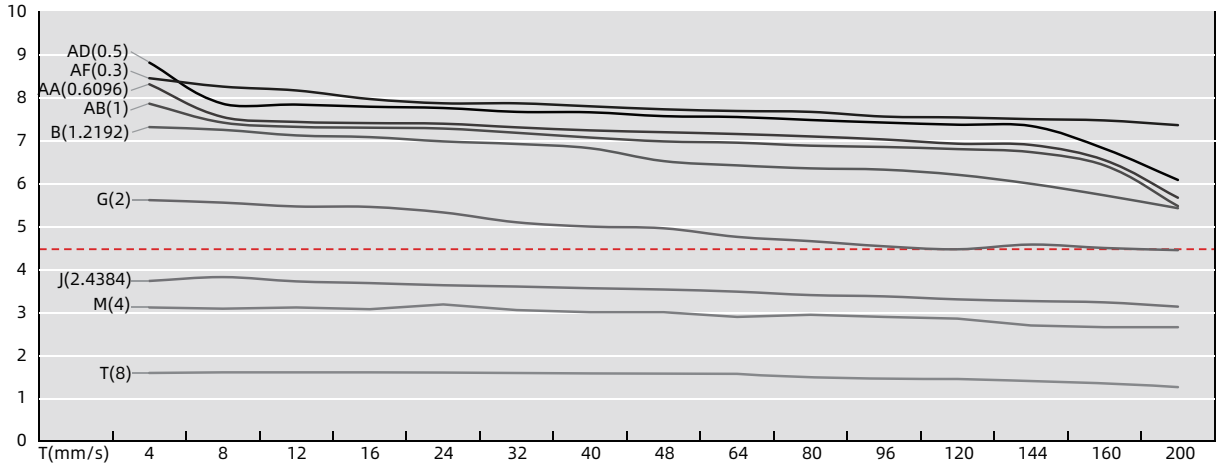
kg ※Bipolar chopper constant current drive operating current 0.5A (RMS) (Recommended Load Limit 4.5kg)




| T(mm/s) | 4 | 8 | 12 | 16 | 24 | 32 | 40 | 48 | 64 | 80 | 96 | 120 | 144 | 160 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AD(mm/s) | 0.25 | 0.5 | 0.75 | 1 | 1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 7.5 | 9 | 10 | 12.5 |
| M(mm/s) | 2 | 4 | 6 | 8 | 12 | 16 | 20 | 24 | 32 | 40 | 48 | 60 | 72 | 80 | 100 |
| G(mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| J(mm/s) | 1.22 | 2.44 | 3.66 | 4.88 | 7.32 | 9.75 | 12.19 | 14.63 | 19.51 | 24.38 | 29.26 | 36.58 | 43.89 | 48.77 | 60.96 |
| B(mm/s) | 0.6 | 1.2 | 1.8 | 2.4 | 3.7 | 4.9 | 6.1 | 7.3 | 9.8 | 12.2 | 14.6 | 18.3 | 22 | 24.4 | 30.5 |
| AB(mm/s) | 0.5 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 18 | 20 | 25 |
| AA(mm/s) | 0.3 | 0.6 | 0.9 | 1.2 | 1.8 | 2.4 | 3.1 | 3.7 | 4.9 | 6.1 | 7.3 | 9.1 | 11 | 12.2 | 15.2 |
| AF(mm/s) | 0.15 | 0.3 | 0.45 | 0.6 | 0.9 | 1.2 | 1.5 | 1.8 | 2.4 | 3 | 3.6 | 4.5 | 5.4 | 6 | 7.5 |
| speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### Size 8 Double Stack Speed Thrust Curves

kg ※Bipolar chopper constant current drive operating current 0.5A (RMS) (Recommended Load Limit 4.5kg)




| T(mm/s) | 4 | 8 | 12 | 16 | 24 | 32 | 40 | 48 | 64 | 80 | 96 | 120 | 144 | 160 | 200 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| AD(mm/s) | 0.25 | 0.5 | 0.75 | 1 | 1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 7.5 | 9 | 10 | 12.5 |
| M(mm/s) | 2 | 4 | 6 | 8 | 12 | 16 | 20 | 24 | 32 | 40 | 48 | 60 | 72 | 80 | 100 |
| G(mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| J(mm/s) | 1.22 | 2.44 | 3.66 | 4.88 | 7.32 | 9.75 | 12.19 | 14.63 | 19.51 | 24.38 | 29.26 | 36.58 | 43.89 | 48.77 | 60.96 |
| B(mm/s) | 0.6 | 1.2 | 1.8 | 2.4 | 3.7 | 4.9 | 6.1 | 7.3 | 9.8 | 12.2 | 14.6 | 18.3 | 22 | 24.4 | 30.5 |
| AB(mm/s) | 0.5 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 18 | 20 | 25 |
| AA(mm/s) | 0.3 | 0.6 | 0.9 | 1.2 | 1.8 | 2.4 | 3.1 | 3.7 | 4.9 | 6.1 | 7.3 | 9.1 | 11 | 12.2 | 15.2 |
| AF(mm/s) | 0.15 | 0.3 | 0.45 | 0.6 | 0.9 | 1.2 | 1.5 | 1.8 | 2.4 | 3 | 3.6 | 4.5 | 5.4 | 6 | 7.5 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS2-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

# 28mm DLM / LR-DLM

Based on DINGS' high-precision lead screw linear actuator platform and self-developed compact linear module structure, the DLM and LR-DLM 28mm series provide compact, reliable, and high-precision linear motion solutions.

The DLM and LR-DLM 28mm series offer a wide range of stroke and lead options with extensive customization capabilities, enabling integrated customized solutions for various applications.

## Motor Characteristics

| Motor | Voltage (V) | Current (A [RMS]) | Resistance (Ω) | Inductance (mH) | Lead wires | Motor length (mm) |
|---|---|---|---|---|---|---|
| 11E2105 | 4.55 | 0.5 | 9.1 | 6.0 | 4 | 33.35 |
| 11E2110 | 2.1 | 1.0 | 2.1 | 1.5 | 4 | 33.35 |
| 11E2209 | 3.9 | 0.95 | 4.1 | 4.0 | 4 | 45 |
| 11E2216 | 2.4 | 1.6 | 1.5 | 1.3 | 4 | 45 |

## Available Lead Screw and Travel per Step

| Screw Dia. (inch) | Screw Dia. (mm) | Lead (inch) | Lead (mm) | Lead Code | Travel Per Step @1.8° (mm)* |
|---|---|---|---|---|---|
| 0.188 | 4.77 | 0.0125 | 0.3175 | AL | 0.0016 |
| 0.188 | 4.77 | 0.025 | 0.635 | A | 0.003175 |
| 0.188 | 4.77 | 0.05 | 1.27 | D* | 0.00635 |
| 0.188 | 4.77 | 0.0625 | 1.5875 | F | 0.0079 |
| 0.188 | 4.77 | 0.1 | 2.54 | K | 0.0127 |
| 0.188 | 4.77 | 0.192 | 4.8768 | Q | 0.0244 |
| 0.188 | 4.77 | 0.2 | 5.08 | R | 0.0254 |
| 0.188 | 4.77 | 0.4 | 10.16 | X | 0.0508 |

* Lead code D is only available for LR-DLM 28mm

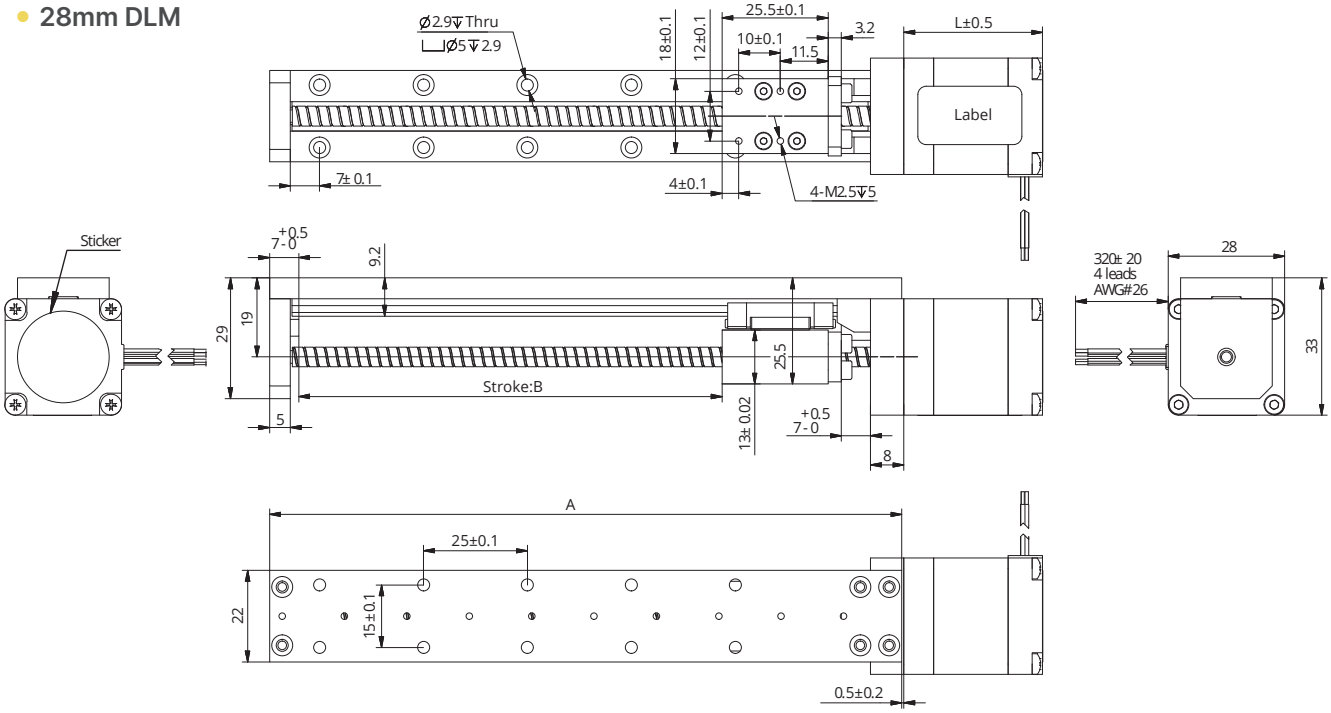
## Mechanical Specifications

| Model | C100B(dyn)(N) | Co(stat)(N) | Mro(Nm) | Mpo(Nm) | Myo(Nm) |
|---|---|---|---|---|---|
| DLM / LR-DLM 28 | 714 | 1071 | 3.794 | 2.219 | 2.219 |

# 28mm DLM / LR-DLM

## Dimensional Drawings

### 28mm DLM



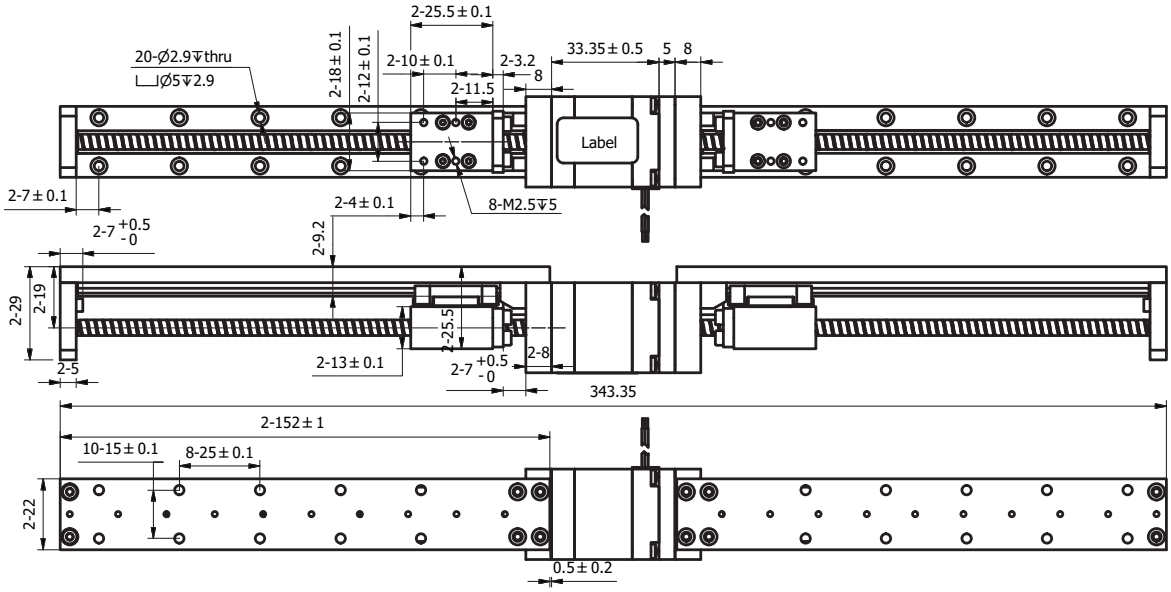

### Available Stroke Selection

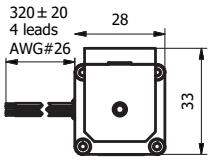
| Size A (mm) | Stroke B (mm) | Weight (kg) | |
|---|---|---|---|
| | | Single stack | Double stack |
| 72 | 20 | 0.200 | 0.256 |
| 92 | 40 | 0.214 | 0.270 |
| 112 | 60 | 0.222 | 0.278 |
| 132 | 80 | 0.235 | 0.291 |
| 152 | 100 | 0.247 | 0.303 |
| 202 | 150 | 0.273 | 0.330 |
| 252 | 200 | 0.310 | 0.366 |
| 302 | 250 | 0.342 | 0.398 |
| 352 | 300 | 0.373 | 0.429 |

* Weight values are for reference only and may vary with actual configuration.

Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

## 28mm LR-DLM




## Available Stroke Selection

| Stroke (mm) | Single stack | | Double stack | |
|---|---|---|---|---|
| | Total Length (mm) | Weight (kg) | Total Length (mm) | Weight (kg) |
| 20 | 183.35 | 0.293 | 195 | 0.349 |
| 40 | 223.35 | 0.319 | 235 | 0.375 |
| 60 | 263.35 | 0.345 | 275 | 0.401 |
| 80 | 303.35 | 0.371 | 315 | 0.427 |
| 100 | 343.35 | 0.397 | 355 | 0.453 |
| 150 | 443.35 | 0.462 | 455 | 0.518 |
| 200 | 543.35 | 0.527 | 555 | 0.583 |
| 250 | 643.35 | 0.592 | 655 | 0.648 |
| 300 | 743.35 | 0.657 | 755 | 0.713 |

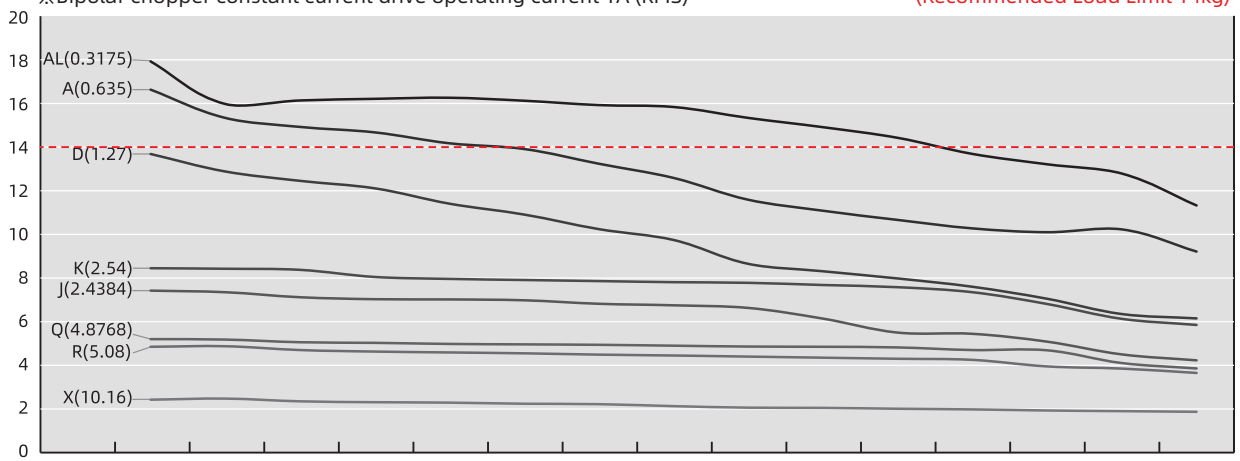
Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

# 28mm DLM / LR-DLM

## Speed Thrust Curves

### Size 11 Single Stack Speed Thrust Curves

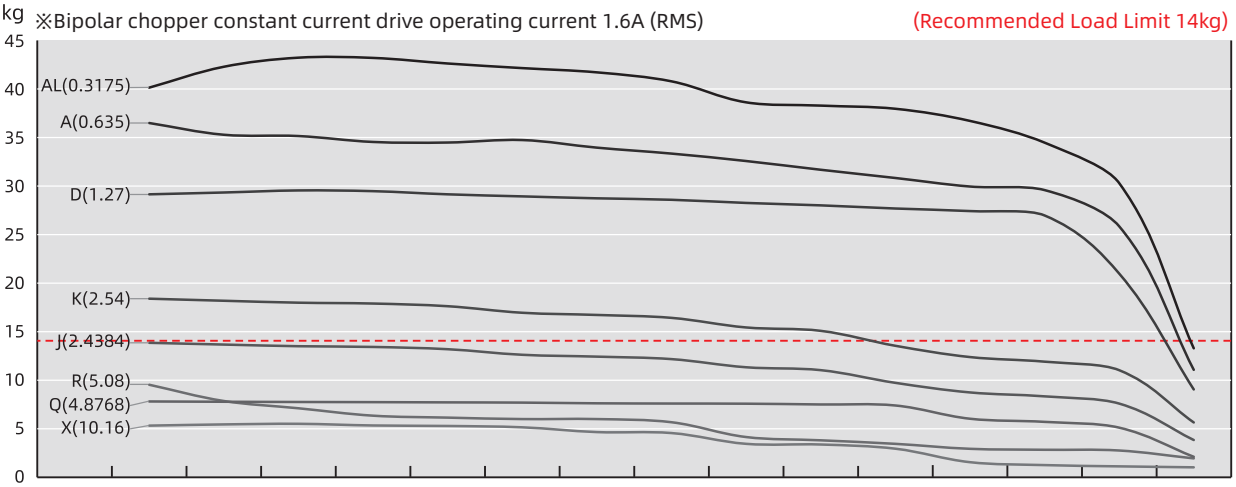
※Bipolar chopper constant current drive operating current 1A (RMS) (Recommended Load Limit 14kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X (mm/s) | 5.08 | 10.16 | 15.24 | 20.32 | 30.48 | 40.64 | 50.8 | 60.96 | 81.28 | 101.6 | 121.92 | 152.4 | 182.88 | 203.2 | 254 |
| R (mm/s) | 2.54 | 5.08 | 7.62 | 10.16 | 15.24 | 20.32 | 25.4 | 30.48 | 40.64 | 50.8 | 60.96 | 76.2 | 91.44 | 101.6 | 127 |
| Q (mm/s) | 2.44 | 4.88 | 7.32 | 9.75 | 14.63 | 19.51 | 24.38 | 29.26 | 39.01 | 48.77 | 58.52 | 73.15 | 87.78 | 97.54 | 121.92 |
| K (mm/s) | 1.27 | 2.54 | 3.81 | 5.08 | 7.62 | 10.16 | 12.7 | 15.24 | 20.32 | 25.4 | 30.48 | 38.1 | 45.72 | 50.8 | 63.5 |
| J (mm/s) | 1.22 | 2.44 | 3.66 | 4.88 | 7.32 | 9.75 | 12.19 | 14.63 | 19.51 | 24.38 | 29.26 | 36.58 | 43.89 | 48.77 | 60.96 |
| D (mm/s) | 0.64 | 1.27 | 1.91 | 2.54 | 3.81 | 5.08 | 6.35 | 7.62 | 10.16 | 12.7 | 15.24 | 19.05 | 22.86 | 25.4 | 31.75 |
| A (mm/s) | 0.32 | 0.64 | 0.95 | 1.27 | 1.91 | 2.54 | 3.18 | 3.81 | 5.08 | 6.35 | 7.62 | 9.53 | 11.43 | 12.7 | 15.88 |
| AL (mm/s) | 0.15 | 0.3 | 0.45 | 0.6 | 0.9 | 1.2 | 1.5 | 1.8 | 2.4 | 3 | 3.6 | 4.5 | 5.4 | 6 | 7.5 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### Size 11 Double Stack Speed Thrust Curves

※Bipolar chopper constant current drive operating current 1.6A (RMS) (Recommended Load Limit 14kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| X (mm/s) | 5.08 | 10.16 | 15.24 | 20.32 | 30.48 | 40.64 | 50.8 | 60.96 | 81.28 | 101.6 | 121.92 | 152.4 | 182.88 | 203.2 | 254 |
| R (mm/s) | 2.54 | 5.08 | 7.62 | 10.16 | 15.24 | 20.32 | 25.4 | 30.48 | 40.64 | 50.8 | 60.96 | 76.2 | 91.44 | 101.6 | 127 |
| Q (mm/s) | 2.44 | 4.88 | 7.32 | 9.75 | 14.63 | 19.51 | 24.38 | 29.26 | 39.01 | 48.77 | 58.52 | 73.15 | 87.78 | 97.54 | 121.92 |
| K (mm/s) | 1.27 | 2.54 | 3.81 | 5.08 | 7.62 | 10.16 | 12.7 | 15.24 | 20.32 | 25.4 | 30.48 | 38.1 | 45.72 | 50.8 | 63.5 |
| J (mm/s) | 1.22 | 2.44 | 3.66 | 4.88 | 7.32 | 9.75 | 12.19 | 14.63 | 19.51 | 24.38 | 29.26 | 36.58 | 43.89 | 48.77 | 60.96 |
| D (mm/s) | 0.64 | 1.27 | 1.91 | 2.54 | 3.81 | 5.08 | 6.35 | 7.62 | 10.16 | 12.7 | 15.24 | 19.05 | 22.86 | 25.4 | 31.75 |
| A (mm/s) | 0.32 | 0.64 | 0.95 | 1.27 | 1.91 | 2.54 | 3.18 | 3.81 | 5.08 | 6.35 | 7.62 | 9.53 | 11.43 | 12.7 | 15.88 |
| AL (mm/s) | 0.15 | 0.3 | 0.45 | 0.6 | 0.9 | 1.2 | 1.5 | 1.8 | 2.4 | 3 | 3.6 | 4.5 | 5.4 | 6 | 7.5 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS2-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

# 35mm DLM / LR-DLM

Based on DINGS' high-precision lead screw linear actuator platform and self-developed compact linear module structure, the DLM and LR-DLM 35mm series provide compact, reliable, and high-precision linear motion solutions.

The DLM and LR-DLM 35mm series offer a wide range of stroke and lead options with extensive customization capabilities, enabling integrated customized solutions for various applications.

## Motor Characteristics

| Motor | Voltage (V) | Current (A [RMS]) | Resistance (Ω) | Inductance (mH) | Lead wires | Motor length (mm) |
|---|---|---|---|---|---|---|
| 14E2105 | 6.6 | 0.5 | 13.2 | 14 | 4 | 33.6 |
| 14E2110 | 3.5 | 1.0 | 3.5 | 3.6 | 4 | 33.6 |
| 14E2115 | 2.7 | 1.5 | 1.8 | 1.9 | 4 | 33.6 |
| 14E2205 | 12.0 | 0.5 | 24.0 | 29 | 4 | 45.6 |
| 14E2210 | 6.0 | 1.0 | 6.0 | 7.2 | 4 | 45.6 |
| 14E2215 | 4.0 | 1.5 | 2.7 | 3.2 | 4 | 45.6 |

## Available Lead Screw and Travel per Step

| Screw Dia. (inch) | Screw Dia. (mm) | Lead (inch) | Lead (mm) | Lead Code | Travel Per Step @1.8° (mm)* |
|---|---|---|---|---|---|
| 0.25 | 6.35 | 0.024 | 0.6096 | AA | 0.003048 |
| 0.25 | 6.35 | 0.0394 | 1 | AB | 0.005 |
| 0.25 | 6.35 | 0.025 | 0.635 | A | 0.003175 |
| 0.25 | 6.35 | 0.048 | 1.2192 | B | 0.006096 |
| 0.25 | 6.35 | 0.05 | 1.27 | D | 0.00635 |
| 0.25 | 6.35 | 0.0625 | 1.5875 | F* | 0.0079 |
| 0.25 | 6.35 | 0.096 | 2.4384 | J | 0.0122 |
| 0.25 | 6.35 | 0.1 | 2.54 | K | 0.0127 |
| 0.25 | 6.35 | 0.125 | 3.175 | L | 0.0159 |
| 0.25 | 6.35 | 0.192 | 4.8768 | Q | 0.024 |
| 0.25 | 6.35 | 0.2 | 5.08 | R | 0.0254 |
| 0.25 | 6.35 | 0.25 | 6.35 | S | 0.0318 |
| 0.25 | 6.35 | 0.333 | 8.4667 | U | 0.0423 |
| 0.25 | 6.35 | 0.384 | 9.7536 | W | 0.0488 |
| 0.25 | 6.35 | 0.5 | 12.7 | Y | 0.0635 |
| 0.25 | 6.35 | 1 | 25.4 | Z | 0.127 |
| 0.315 | 8 | 0.1575 | 4 | M | 0.02 |
| 0.315 | 8 | 0.315 | 8 | T | 0.04 |
| 0.315 | 8 | 0.0787 | 2 | G | 0.01 |
| 0.315 | 8 | 0.3937 | 10 | C | 0.05 |

* Lead code F is only available for LR-DLM 35mm

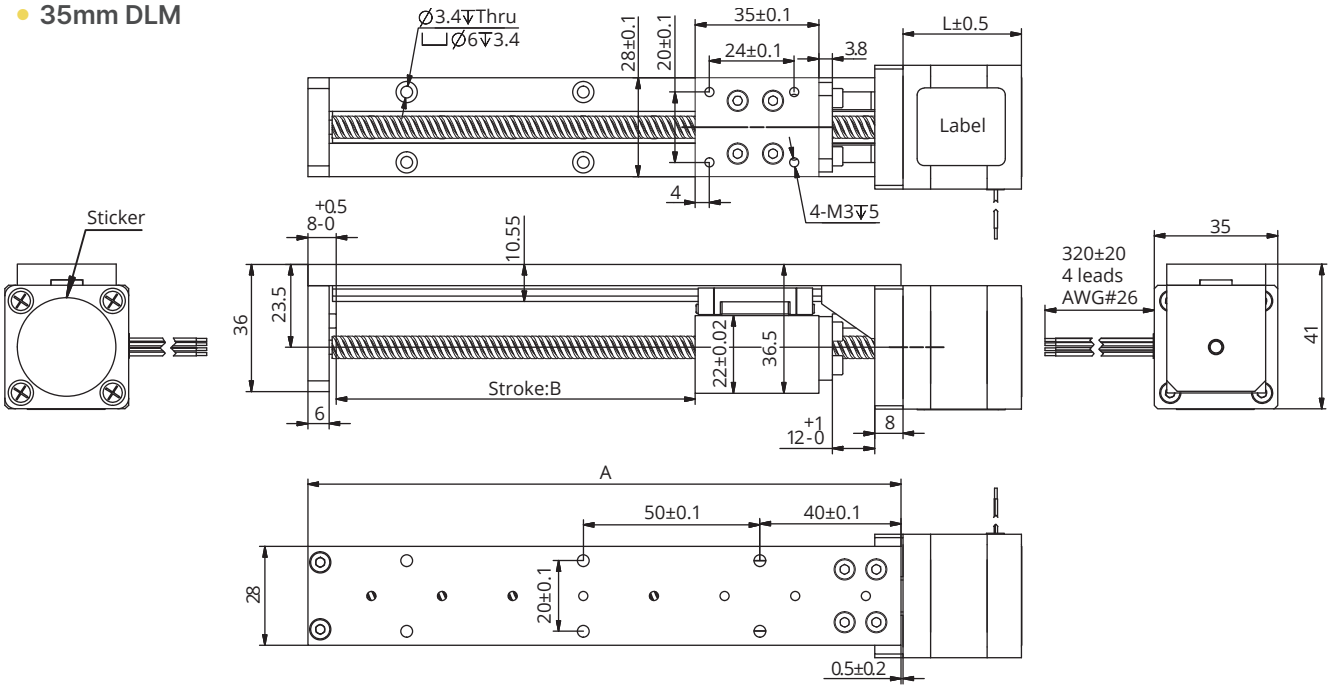
# 35mm DLM / LR-DLM

## Mechanical Specifications

| Model | C100B(dyn)(N) | Co(stat)(N) | Mro(Nm) | Mpo(Nm) | Myo(Nm) |
|---|---|---|---|---|---|
| DLM / LR-DLM 35 | 1379 | 1820 | 8.288 | 5.733 | 5.733 |

## Dimensional Drawings

### 35mm DLM



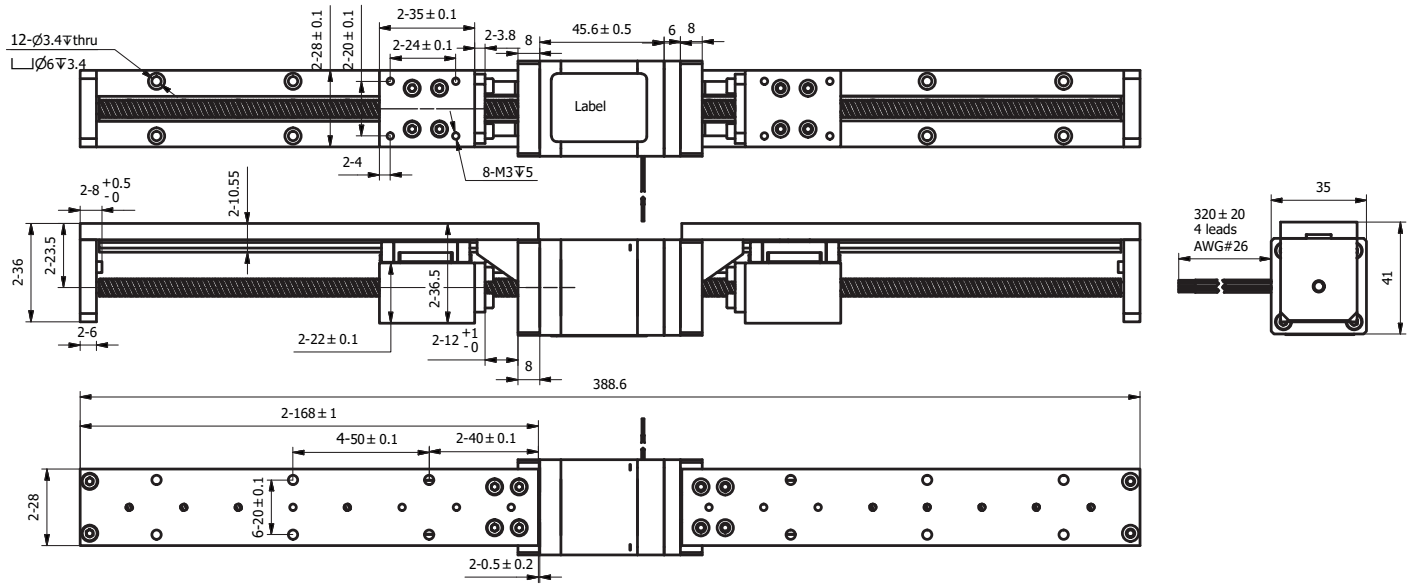

### Available Stroke Selection

| Size A (mm) | Stroke B (mm) | Weight (kg) | |
|---|---|---|---|
| | | Single stack | Double stack |
| 118 | 50 | 0.434 | 0.456 |
| 168 | 100 | 0.457 | 0.501 |
| 218 | 150 | 0.525 | 0.546 |
| 268 | 200 | 0.570 | 0.591 |
| 318 | 250 | 0.615 | 0.636 |
| 368 | 300 | 0.660 | 0.691 |
| 418 | 350 | 0.705 | 0.726 |
| 468 | 400 | 0.751 | 0.772 |
| 518 | 450 | 0.796 | 0.817 |
| 568 | 500 | 0.841 | 0.862 |

* Weight values are for reference only and may vary with actual configuration.

Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

## 35mm LR-DLM




## Available Stroke Selection

| Stroke (mm) | Single stack | | Double stack | |
|---|---|---|---|---|
| | Total Length (mm) | Weight (kg) | Total Length (mm) | Weight (kg) |
| 50 | 276.6 | 0.55 | 288.6 | 0.571 |
| 100 | 376.6 | 0.643 | 388.6 | 0.664 |
| 150 | 476.6 | 0.736 | 488.6 | 0.757 |
| 200 | 576.6 | 0.829 | 588.6 | 0.85 |
| 250 | 676.6 | 0.922 | 688.6 | 0.943 |
| 300 | 776.6 | 1.015 | 788.6 | 1.036 |
| 350 | 876.6 | 1.108 | 888.6 | 1.129 |
| 400 | 976.6 | 1.201 | 988.6 | 1.222 |

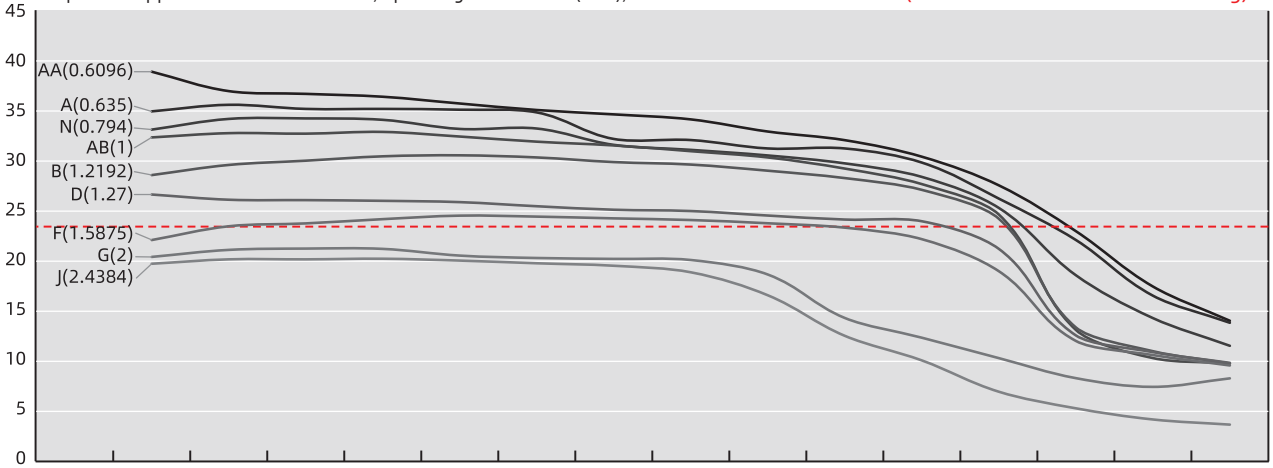
Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

# 35mm DLM / LR-DLM

## Speed Thrust Curves

### Size 14 Single Stack Speed Thrust Curves

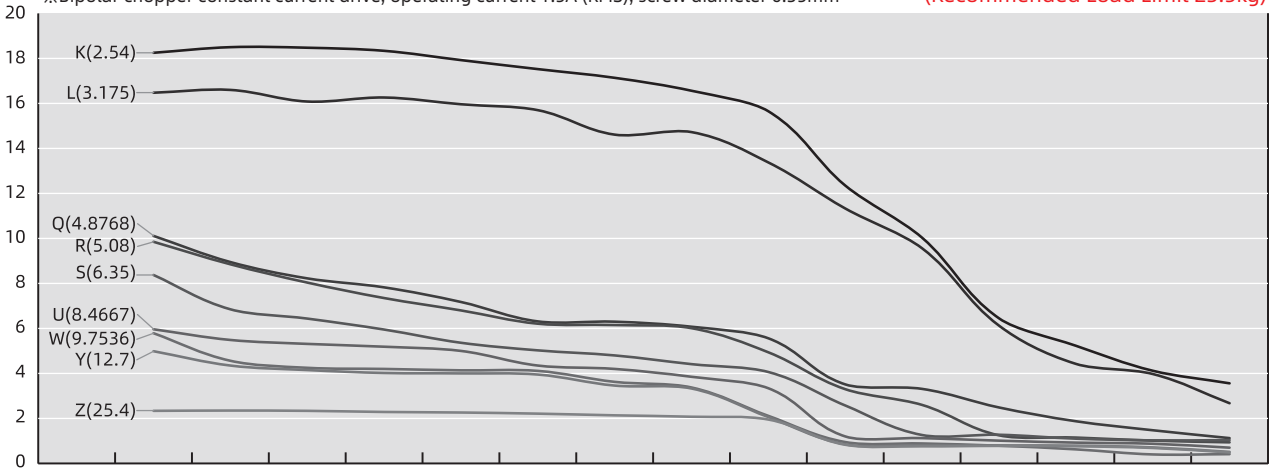
kg ※Bipolar chopper constant current drive, operating current 1.5A (RMS), screw diameter 6.35mm (Recommended Load Limit 23.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J (mm/s) | 1.22 | 2.44 | 3.66 | 4.88 | 7.32 | 9.75 | 12.19 | 14.63 | 19.51 | 24.38 | 29.26 | 36.58 | 43.89 | 48.77 | 60.96 |
| G (mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| F (mm/s) | 0.79 | 1.59 | 2.38 | 3.18 | 4.76 | 6.35 | 7.94 | 9.53 | 12.7 | 15.88 | 19.05 | 23.81 | 28.58 | 31.75 | 39.69 |
| D (mm/s) | 0.64 | 1.27 | 1.91 | 2.54 | 3.81 | 5.08 | 6.35 | 7.62 | 10.16 | 12.7 | 15.24 | 19.05 | 22.86 | 25.4 | 31.75 |
| B (mm/s) | 0.61 | 1.22 | 1.83 | 2.44 | 3.66 | 4.88 | 6.1 | 7.32 | 9.75 | 12.19 | 14.63 | 18.29 | 21.95 | 24.38 | 30.48 |
| AB (mm/s) | 0.5 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 18 | 20 | 25 |
| N (mm/s) | 0.4 | 0.79 | 1.19 | 1.59 | 2.38 | 3.18 | 3.97 | 4.76 | 6.35 | 7.94 | 9.53 | 11.91 | 14.29 | 15.88 | 19.85 |
| A (mm/s) | 0.32 | 0.64 | 0.95 | 1.27 | 1.91 | 2.54 | 3.18 | 3.81 | 5.08 | 6.35 | 7.62 | 9.53 | 11.43 | 12.7 | 15.88 |
| AA (mm/s) | 0.3 | 0.61 | 0.91 | 1.22 | 1.83 | 2.44 | 3.05 | 3.66 | 4.88 | 6.1 | 7.32 | 9.14 | 10.97 | 12.19 | 15.24 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### Size 14 Single Stack Speed Thrust Curves

kg ※Bipolar chopper constant current drive, operating current 1.5A (RMS), screw diameter 6.35mm (Recommended Load Limit 23.5kg)



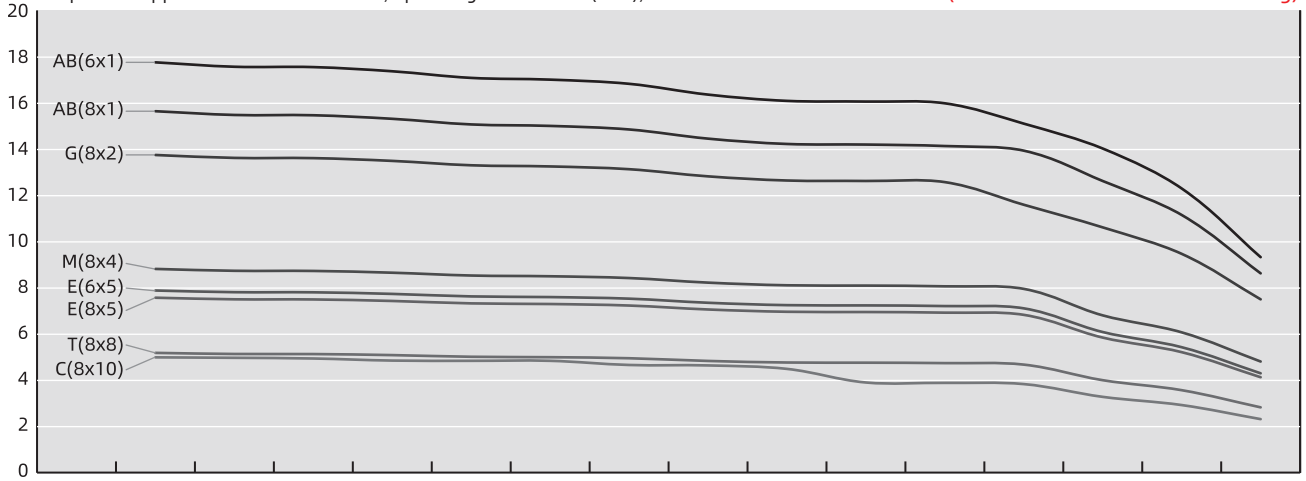

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z (mm/s) | 12.7 | 25.4 | 38.1 | 50.8 | 76.2 | 101.6 | 127 | 152.4 | 203.2 | 254 | 304.8 | 381 | 457.2 | 508 | 635 |
| Y (mm/s) | 6.35 | 12.7 | 19.05 | 25.4 | 38.1 | 50.8 | 63.5 | 76.2 | 101.6 | 127 | 152.4 | 190.5 | 228.6 | 254 | 317.5 |
| W (mm/s) | 4.88 | 9.75 | 14.63 | 19.51 | 29.26 | 39.01 | 48.77 | 58.52 | 78.03 | 97.54 | 117.04 | 146.3 | 175.56 | 195.07 | 243.84 |
| U (mm/s) | 4.23 | 8.47 | 12.7 | 16.93 | 25.4 | 33.87 | 42.33 | 50.8 | 67.73 | 84.67 | 101.6 | 127 | 152.4 | 169.33 | 211.67 |
| S (mm/s) | 3.18 | 6.35 | 9.53 | 12.7 | 19.05 | 25.4 | 31.75 | 38.1 | 50.8 | 63.5 | 76.2 | 95.25 | 114.3 | 127 | 158.75 |
| R (mm/s) | 2.54 | 5.08 | 7.62 | 10.16 | 15.24 | 20.32 | 25.4 | 30.48 | 40.64 | 50.8 | 60.96 | 76.2 | 91.44 | 101.6 | 127 |
| Q (mm/s) | 2.44 | 4.88 | 7.32 | 9.75 | 14.63 | 19.51 | 24.38 | 29.26 | 39.01 | 48.77 | 58.52 | 73.15 | 87.78 | 97.54 | 121.92 |
| L (mm/s) | 1.59 | 3.18 | 4.76 | 6.35 | 9.53 | 12.7 | 15.88 | 19.05 | 25.4 | 31.75 | 38.1 | 47.63 | 57.15 | 63.5 | 79.38 |
| K (mm/s) | 1.27 | 2.54 | 3.81 | 5.08 | 7.62 | 10.16 | 12.7 | 15.24 | 20.32 | 25.4 | 30.48 | 38.1 | 45.72 | 50.8 | 63.5 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

## TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS2-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

## Size 14 Single Stack Speed Thrust Curves

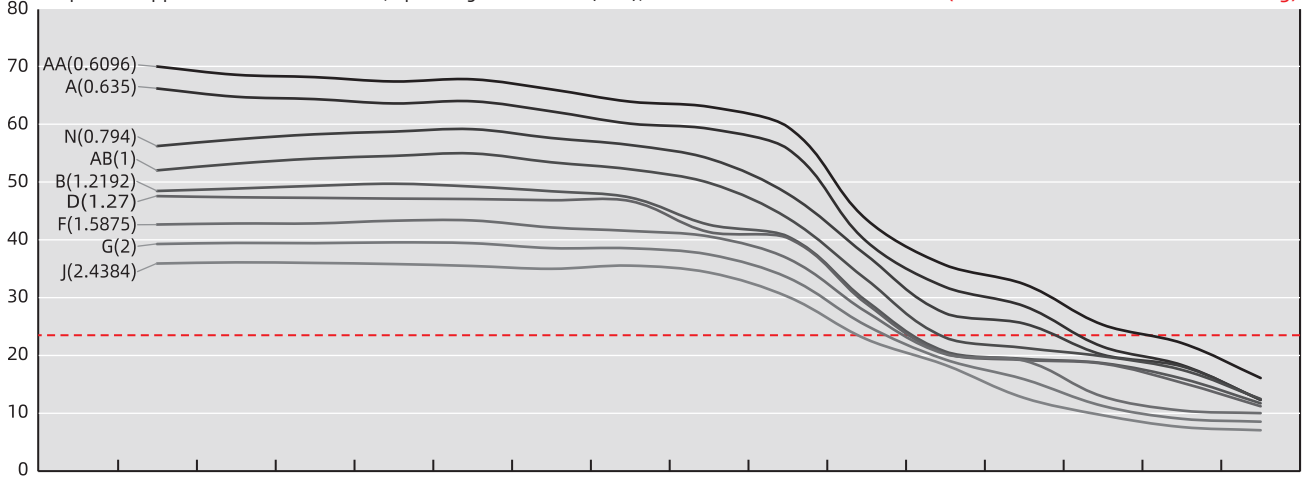
kg ※Bipolar chopper constant current drive, operating current 1.5A (RMS), screw diameter 6&8mm (Recommended Load Limit 23.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C (mm/s) | 5 | 10 | 15 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 | 150 | 180 | 200 | 250 |
| T (mm/s) | 4 | 8 | 12 | 16 | 24 | 32 | 40 | 48 | 64 | 80 | 96 | 120 | 144 | 160 | 200 |
| E (mm/s) | 2.5 | 5 | 7.5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 75 | 90 | 100 | 125 |
| M (mm/s) | 2 | 4 | 6 | 8 | 12 | 16 | 20 | 24 | 32 | 40 | 48 | 60 | 72 | 80 | 100 |
| G (mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| AB (mm/s) | 0.5 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 18 | 20 | 25 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

## Size 14 Double Stack Speed Thrust Curves

kg ※Bipolar chopper constant current drive, operating current 1.5A (RMS), screw diameter 6.35mm (Recommended Load Limit 23.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J (mm/s) | 1.22 | 2.44 | 3.66 | 4.88 | 7.32 | 9.75 | 12.19 | 14.63 | 19.51 | 24.38 | 29.26 | 36.58 | 43.89 | 48.77 | 60.96 |
| G (mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| F (mm/s) | 0.79 | 1.59 | 2.38 | 3.18 | 4.76 | 6.35 | 7.94 | 9.53 | 12.7 | 15.88 | 19.05 | 23.81 | 28.58 | 31.75 | 39.69 |
| D (mm/s) | 0.64 | 1.27 | 1.91 | 2.54 | 3.81 | 5.08 | 6.35 | 7.62 | 10.16 | 12.7 | 15.24 | 19.05 | 22.86 | 25.4 | 31.75 |
| B (mm/s) | 0.61 | 1.22 | 1.83 | 2.44 | 3.66 | 4.88 | 6.1 | 7.32 | 9.75 | 12.19 | 14.63 | 18.29 | 21.95 | 24.38 | 30.48 |
| AB (mm/s) | 0.5 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 18 | 20 | 25 |
| N (mm/s) | 0.4 | 0.79 | 1.19 | 1.59 | 2.38 | 3.18 | 3.97 | 4.76 | 6.35 | 7.94 | 9.53 | 11.91 | 14.29 | 15.88 | 19.85 |
| A (mm/s) | 0.32 | 0.64 | 0.95 | 1.27 | 1.91 | 2.54 | 3.18 | 3.81 | 5.08 | 6.35 | 7.62 | 9.53 | 11.43 | 12.7 | 15.88 |
| AA (mm/s) | 0.3 | 0.61 | 0.91 | 1.22 | 1.83 | 2.44 | 3.05 | 3.66 | 4.88 | 6.1 | 7.32 | 9.14 | 10.97 | 12.19 | 15.24 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

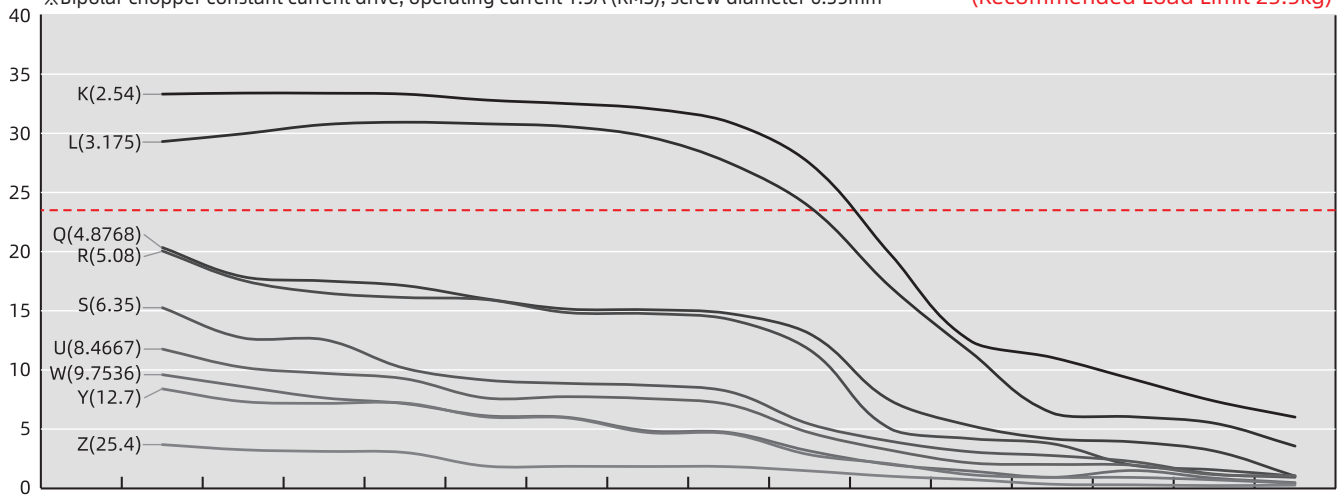
### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS2-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

# 35mm DLM / LR-DLM

## Size 14 Double Stack Speed Thrust Curves

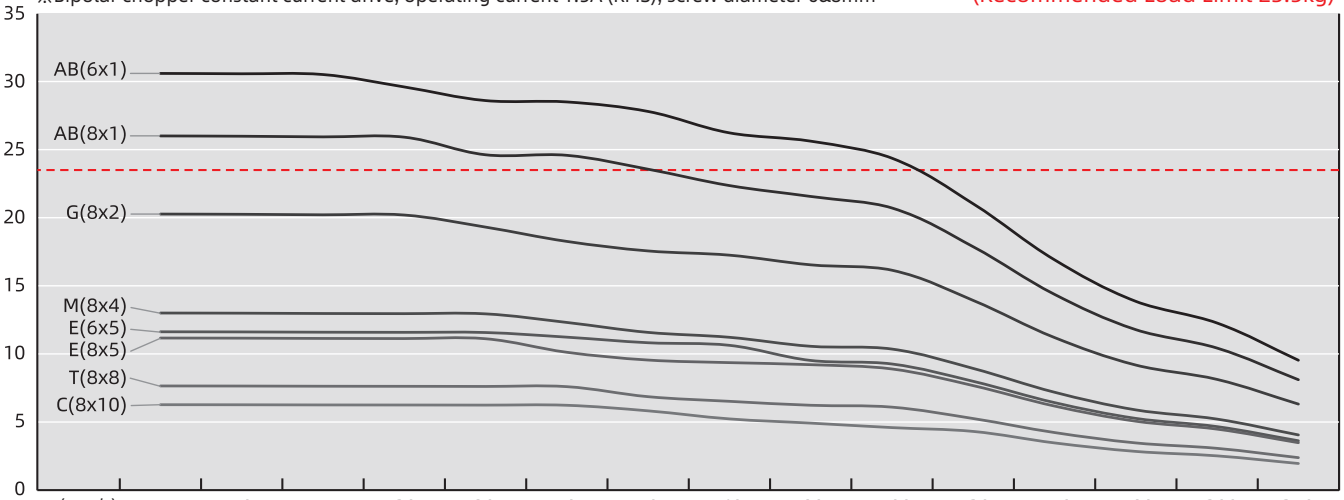
kg ※Bipolar chopper constant current drive, operating current 1.5A (RMS), screw diameter 6.35mm (Recommended Load Limit 23.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z (mm/s) | 12.7 | 25.4 | 38.1 | 50.8 | 76.2 | 101.6 | 127 | 152.4 | 203.2 | 254 | 304.8 | 381 | 457.2 | 508 | 635 |
| Y (mm/s) | 6.35 | 12.7 | 19.05 | 25.4 | 38.1 | 50.8 | 63.5 | 76.2 | 101.6 | 127 | 152.4 | 190.5 | 228.6 | 254 | 317.5 |
| W (mm/s) | 4.88 | 9.75 | 14.63 | 19.51 | 29.26 | 39.01 | 48.77 | 58.52 | 78.03 | 97.54 | 117.04 | 146.3 | 175.56 | 195.07 | 243.84 |
| U (mm/s) | 4.23 | 8.47 | 12.7 | 16.93 | 25.4 | 33.87 | 42.33 | 50.8 | 67.73 | 84.67 | 101.6 | 127 | 152.4 | 169.33 | 211.67 |
| S (mm/s) | 3.175 | 6.35 | 9.525 | 12.7 | 19.05 | 25.4 | 31.75 | 38.1 | 50.8 | 63.5 | 76.2 | 95.25 | 114.3 | 127 | 158.75 |
| R (mm/s) | 2.54 | 5.08 | 7.62 | 10.16 | 15.24 | 20.32 | 25.4 | 30.48 | 40.64 | 50.8 | 60.96 | 76.2 | 91.44 | 101.6 | 127 |
| Q (mm/s) | 2.44 | 4.88 | 7.32 | 9.75 | 14.63 | 19.51 | 24.38 | 29.26 | 39.01 | 48.77 | 58.52 | 73.15 | 87.78 | 97.54 | 121.92 |
| L (mm/s) | 1.59 | 3.18 | 4.76 | 6.35 | 9.53 | 12.7 | 15.88 | 19.05 | 25.4 | 31.75 | 38.1 | 47.63 | 57.15 | 63.5 | 79.38 |
| K (mm/s) | 1.27 | 2.54 | 3.81 | 5.08 | 7.62 | 10.16 | 12.7 | 15.24 | 20.32 | 25.4 | 30.48 | 38.1 | 45.72 | 50.8 | 63.5 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

## Size 14 Double Stack Speed Thrust Curves

kg ※Bipolar chopper constant current drive, operating current 1.5A (RMS), screw diameter 6&8mm (Recommended Load Limit 23.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C (mm/s) | 5 | 10 | 15 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 | 150 | 180 | 200 | 250 |
| T (mm/s) | 4 | 8 | 12 | 16 | 24 | 32 | 40 | 48 | 64 | 80 | 96 | 120 | 144 | 160 | 200 |
| E (mm/s) | 2.5 | 5 | 7.5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 75 | 90 | 100 | 125 |
| M (mm/s) | 2 | 4 | 6 | 8 | 12 | 16 | 20 | 24 | 32 | 40 | 48 | 60 | 72 | 80 | 100 |
| G (mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| AB (mm/s) | 0.5 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 18 | 20 | 25 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS2-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

# 42mm DLM / LR-DLM

Based on DINGS' high-precision lead screw linear actuator platform and self-developed compact linear module structure, the DLM and LR-DLM 42mm series provide compact, reliable, and high-precision linear motion solutions.

The DLM and LR-DLM 42mm series offer a wide range of stroke and lead options with extensive customization capabilities, enabling integrated customized solutions for various applications.

## Motor Characteristics

| Motor | Voltage (V) | Current (A [RMS]) | Resistance (Ω) | Inductance (mH) | Lead wires | Motor length (mm) |
|---|---|---|---|---|---|---|
| 17E2105 | 7.2 | 0.5 | 14.4 | 19.8 | 4 | 34.1 |
| 17E2110 | 3.8 | 1.0 | 3.8 | 5.0 | 4 | 34.1 |
| 17E2115 | 2.85 | 1.5 | 1.9 | 2.2 | 4 | 34.1 |
| 17E2205 | 11.0 | 0.5 | 22 | 46 | 4 | 48.1 |
| 17E2212 | 4.5 | 1.2 | 3.8 | 8.0 | 4 | 48.1 |
| 17E2225 | 2.5 | 2.5 | 1.0 | 1.8 | 4 | 48.1 |

## Available Lead Screw and Travel per Step

| Screw Dia. (inch) | Screw Dia. (mm) | Lead (inch) | Lead (mm) | Lead Code | Travel Per Step @1.8° (mm)* |
|---|---|---|---|---|---|
| 0.25 | 6.35 | 0.024 | 0.6096 | AA | 0.003048 |
| 0.25 | 6.35 | 0.0394 | 1 | AB | 0.005 |
| 0.25 | 6.35 | 0.025 | 0.635 | A | 0.003175 |
| 0.25 | 6.35 | 0.048 | 1.2192 | B | 0.006096 |
| 0.25 | 6.35 | 0.05 | 1.27 | D | 0.00635 |
| 0.25 | 6.35 | 0.0625 | 1.5875 | F* | 0.0079 |
| 0.25 | 6.35 | 0.096 | 2.4384 | J | 0.0122 |
| 0.25 | 6.35 | 0.1 | 2.54 | K | 0.0127 |
| 0.25 | 6.35 | 0.125 | 3.175 | L | 0.0159 |
| 0.25 | 6.35 | 0.192 | 4.8768 | Q | 0.024 |
| 0.25 | 6.35 | 0.2 | 5.08 | R | 0.0254 |
| 0.25 | 6.35 | 0.25 | 6.35 | S | 0.0318 |
| 0.25 | 6.35 | 0.333 | 8.4667 | U | 0.0423 |
| 0.25 | 6.35 | 0.384 | 9.7536 | W | 0.0488 |
| 0.25 | 6.35 | 0.5 | 12.7 | Y | 0.0635 |
| 0.25 | 6.35 | 1 | 25.4 | Z | 0.127 |
| 0.315 | 8 | 0.1575 | 4 | M | 0.02 |
| 0.315 | 8 | 0.315 | 8 | T | 0.04 |
| 0.315 | 8 | 0.0787 | 2 | G | 0.01 |
| 0.315 | 8 | 0.3937 | 10 | C | 0.05 |

* Lead code F is only available for LR-DLM 42mm

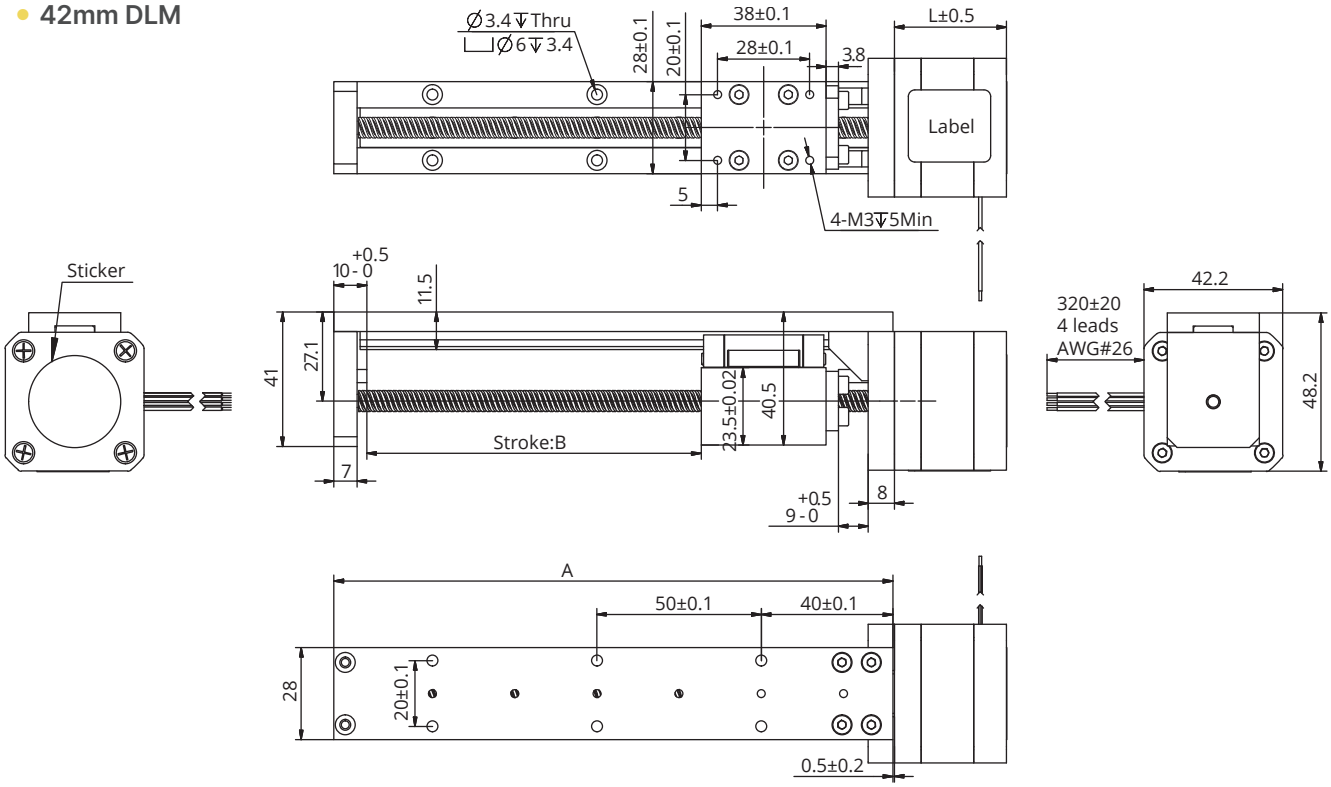
# 42mm DLM / LR-DLM

## Mechanical Specifications

| Model | C100B(dyn)(N) | Co(stat)(N) | Mro(Nm) | Mpo(Nm) | Myo(Nm) |
|---|---|---|---|---|---|
| DLM / LR-DLM 42 | 2128 | 2702 | 16.541 | 8.799 | 8.799 |

## Dimensional Drawings

### 42mm DLM



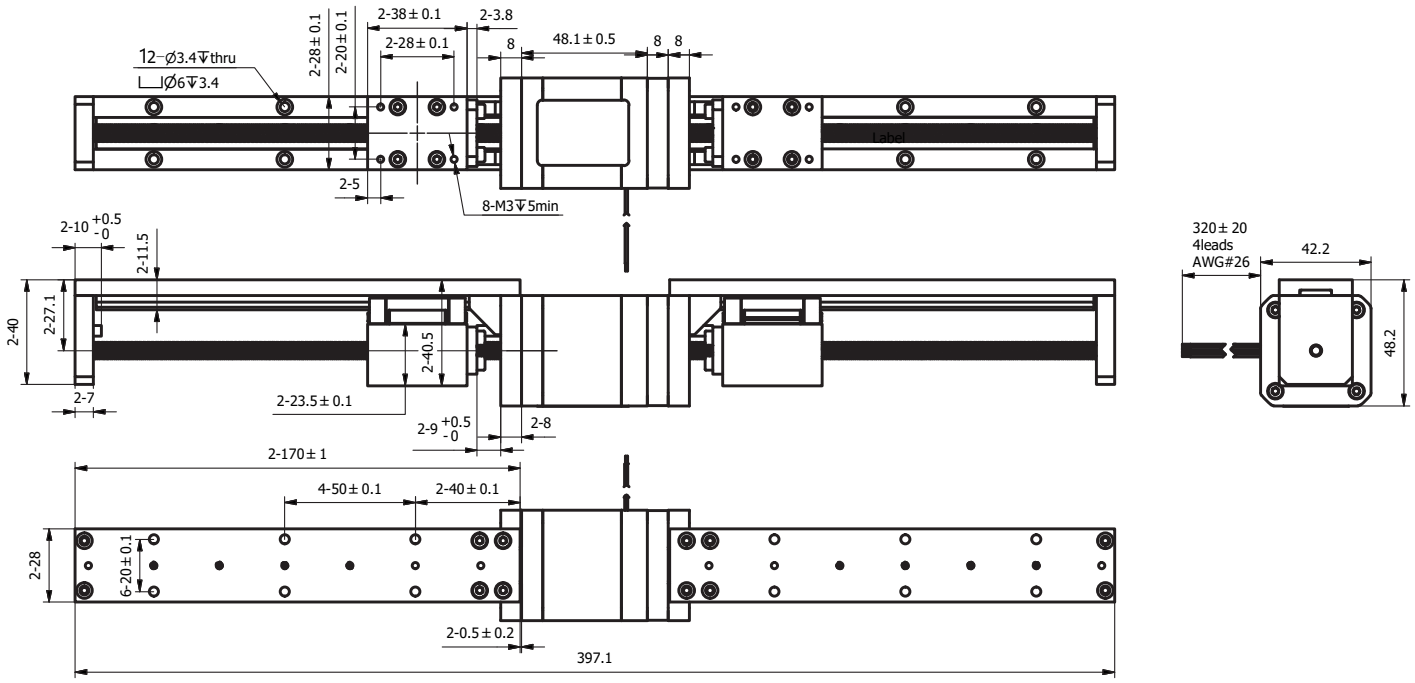

### Available Stroke Selection

| Size A (mm) | Stroke B (mm) | Weight (kg) | |
|---|---|---|---|
| | | Single stack | Double stack |
| 120 | 50 | 0.508 | 0.658 |
| 170 | 100 | 0.568 | 0.700 |
| 220 | 150 | 0.628 | 0.805 |
| 270 | 200 | 0.688 | 0.820 |
| 320 | 250 | 0.748 | 0.910 |
| 370 | 300 | 0.808 | 0.940 |
| 420 | 350 | 0.868 | 1.000 |
| 470 | 400 | 0.928 | 1.060 |
| 520 | 450 | 0.988 | 1.120 |
| 570 | 500 | 1.048 | 1.180 |

* Weight values are for reference only and may vary with actual configuration.

Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

## 42mm LR-DLM




## Available Stroke Selection

| Stroke (mm) | Single stack | | Double stack | |
|---|---|---|---|---|
| | Total Length (mm) | Weight (kg) | Total Length (mm) | Weight (kg) |
| 50 | 283.1 | 0.808 | 297.1 | 0.940 |
| 100 | 383.1 | 0.899 | 397.1 | 1.031 |
| 150 | 483.1 | 0.990 | 497.1 | 1.122 |
| 200 | 583.1 | 1.082 | 597.1 | 1.214 |
| 250 | 683.1 | 1.172 | 697.1 | 1.304 |
| 300 | 783.1 | 1.263 | 797.1 | 1.395 |
| 350 | 883.1 | 1.354 | 897.1 | 1.486 |
| 400 | 983.1 | 1.445 | 997.1 | 1.577 |

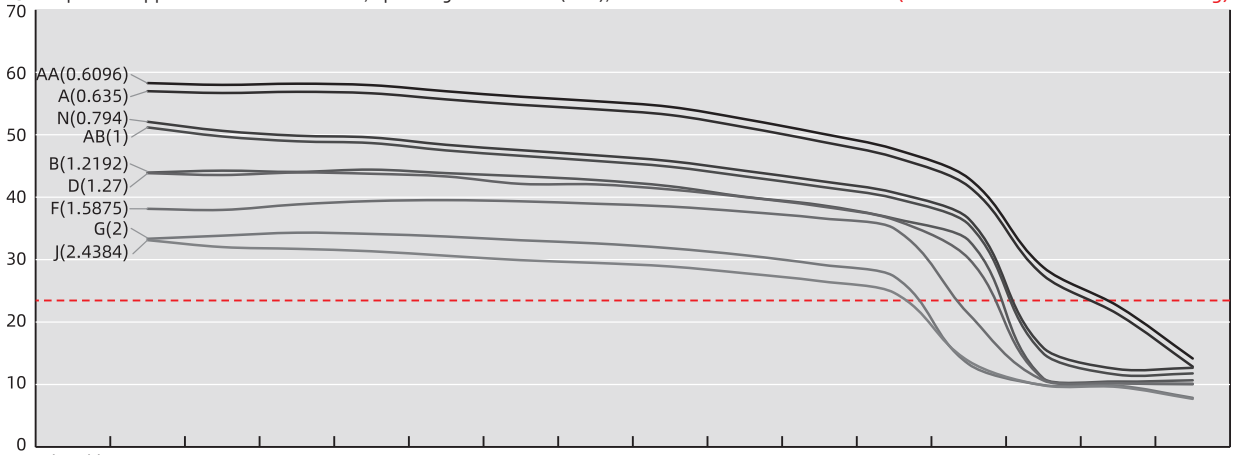
Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

# 42mm DLM / LR-DLM

## Speed Thrust Curves

### Size 17 Single Stack Speed Thrust Curves

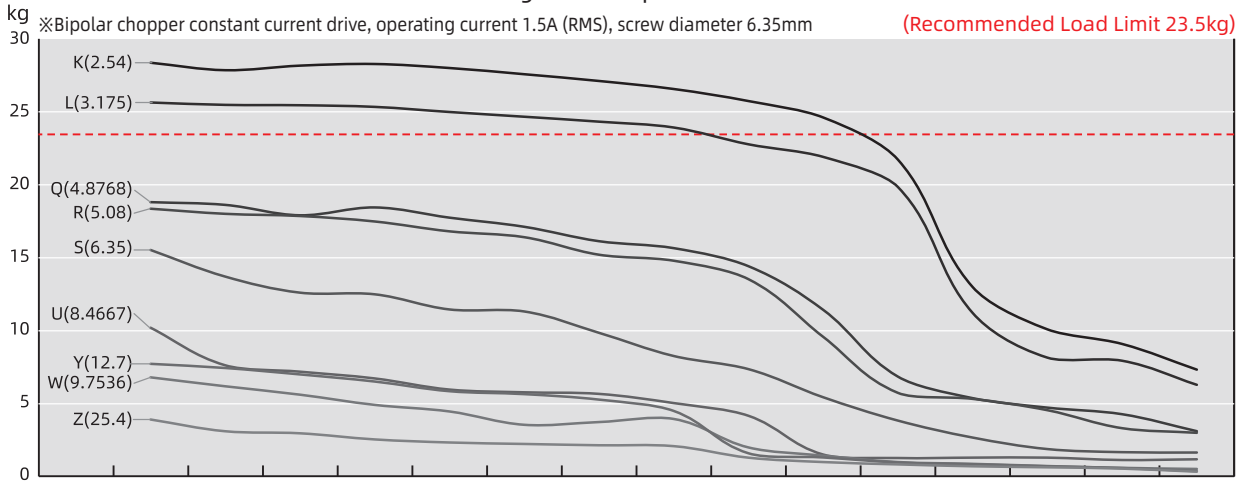
kg ※Bipolar chopper constant current drive, operating current 1.5A (RMS), screw diameter 6.35mm (Recommended Load Limit 23.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J (mm/s) | 1.22 | 2.44 | 3.66 | 4.88 | 7.32 | 9.75 | 12.19 | 14.63 | 19.51 | 24.38 | 29.26 | 36.58 | 43.89 | 48.77 | 60.96 |
| G (mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| F (mm/s) | 0.79 | 1.59 | 2.38 | 3.18 | 4.76 | 6.35 | 7.94 | 9.53 | 12.7 | 15.88 | 19.05 | 23.81 | 28.58 | 31.75 | 39.69 |
| D (mm/s) | 0.64 | 1.27 | 1.91 | 2.54 | 3.81 | 5.08 | 6.35 | 7.62 | 10.16 | 12.7 | 15.24 | 19.05 | 22.86 | 25.4 | 31.75 |
| B (mm/s) | 0.61 | 1.22 | 1.83 | 2.44 | 3.66 | 4.88 | 6.1 | 7.32 | 9.75 | 12.19 | 14.63 | 18.29 | 21.95 | 24.38 | 30.48 |
| AB (mm/s) | 0.5 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 18 | 20 | 25 |
| N (mm/s) | 0.4 | 0.79 | 1.19 | 1.59 | 2.38 | 3.18 | 3.97 | 4.76 | 6.35 | 7.94 | 9.53 | 11.91 | 14.29 | 15.88 | 19.85 |
| A (mm/s) | 0.32 | 0.64 | 0.95 | 1.27 | 1.91 | 2.54 | 3.18 | 3.81 | 5.08 | 6.35 | 7.62 | 9.53 | 11.43 | 12.7 | 15.88 |
| AA (mm/s) | 0.3 | 0.61 | 0.91 | 1.22 | 1.83 | 2.44 | 3.05 | 3.66 | 4.88 | 6.1 | 7.32 | 9.14 | 10.97 | 12.19 | 15.24 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### Size 17 Single Stack Speed Thrust Curves

kg ※Bipolar chopper constant current drive, operating current 1.5A (RMS), screw diameter 6.35mm (Recommended Load Limit 23.5kg)



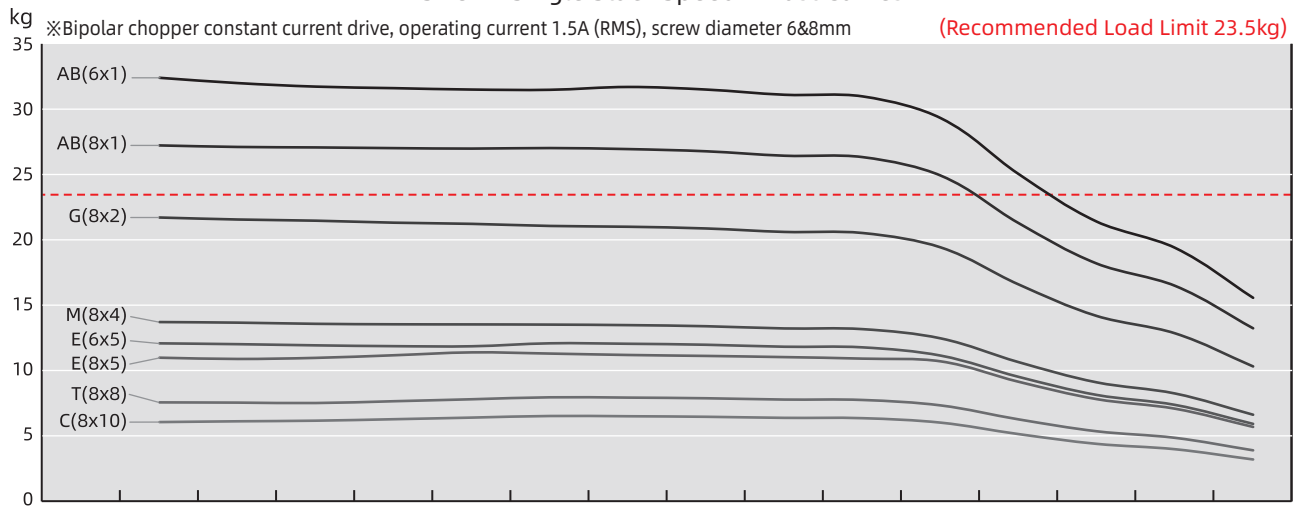

| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z (mm/s) | 12.7 | 25.4 | 38.1 | 50.8 | 76.2 | 101.6 | 127 | 152.4 | 203.2 | 254 | 304.8 | 381 | 457.2 | 508 | 635 |
| Y (mm/s) | 6.35 | 12.7 | 19.05 | 25.4 | 38.1 | 50.8 | 63.5 | 76.2 | 101.6 | 127 | 152.4 | 190.5 | 228.6 | 254 | 317.5 |
| W (mm/s) | 4.88 | 9.75 | 14.63 | 19.51 | 29.26 | 39.01 | 48.77 | 58.52 | 78.03 | 97.54 | 117.04 | 146.3 | 175.56 | 195.07 | 243.84 |
| U (mm/s) | 4.23 | 8.47 | 12.7 | 16.93 | 25.4 | 33.87 | 42.33 | 50.8 | 67.73 | 84.67 | 101.6 | 127 | 152.4 | 169.33 | 211.67 |
| S (mm/s) | 3.18 | 6.35 | 9.53 | 12.7 | 19.05 | 25.4 | 31.75 | 38.1 | 50.8 | 63.5 | 76.2 | 95.25 | 114.3 | 127 | 158.75 |
| R (mm/s) | 2.54 | 5.08 | 7.62 | 10.16 | 15.24 | 20.32 | 25.4 | 30.48 | 40.64 | 50.8 | 60.96 | 76.2 | 91.44 | 101.6 | 127 |
| Q (mm/s) | 2.44 | 4.88 | 7.32 | 9.75 | 14.63 | 19.51 | 24.38 | 29.26 | 39.01 | 48.77 | 58.52 | 73.15 | 87.78 | 97.54 | 121.92 |
| L (mm/s) | 1.59 | 3.18 | 4.76 | 6.35 | 9.53 | 12.7 | 15.88 | 19.05 | 25.4 | 31.75 | 38.1 | 47.63 | 57.15 | 63.5 | 79.38 |
| K (mm/s) | 1.27 | 2.54 | 3.81 | 5.08 | 7.62 | 10.16 | 12.7 | 15.24 | 20.32 | 25.4 | 30.48 | 38.1 | 45.72 | 50.8 | 63.5 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS2-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

## Size 17 Single Stack Speed Thrust Curves

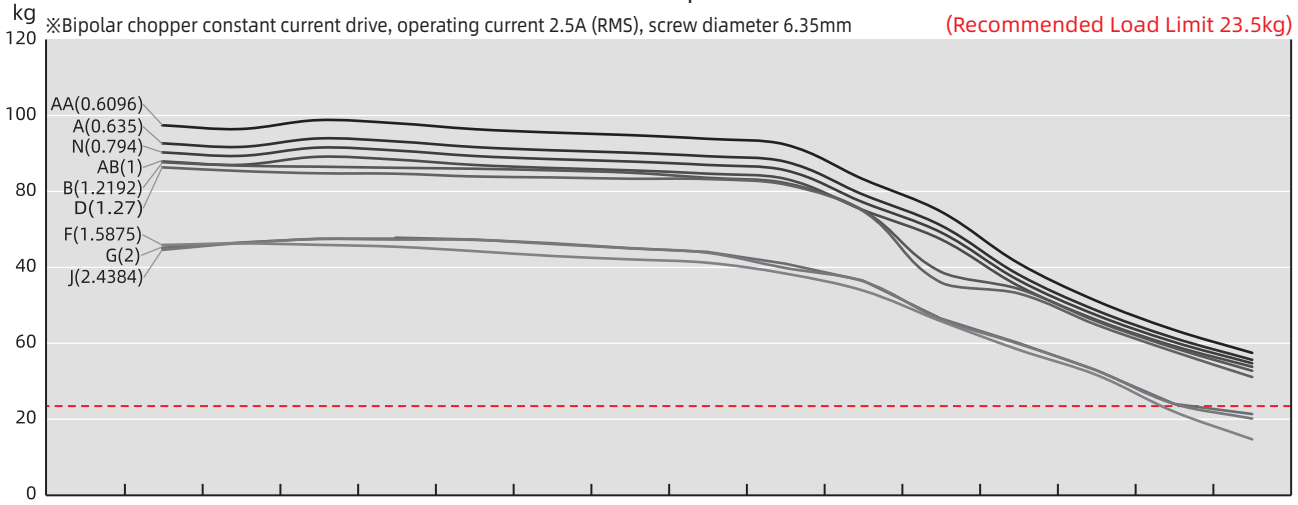
※Bipolar chopper constant current drive, operating current 1.5A (RMS), screw diameter 6&8mm (Recommended Load Limit 23.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C (mm/s) | 5 | 10 | 15 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 | 150 | 180 | 200 | 250 |
| T (mm/s) | 4 | 8 | 12 | 16 | 24 | 32 | 40 | 48 | 64 | 80 | 96 | 120 | 144 | 160 | 200 |
| E (mm/s) | 2.5 | 5 | 7.5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 75 | 90 | 100 | 125 |
| M (mm/s) | 2 | 4 | 6 | 8 | 12 | 16 | 20 | 24 | 32 | 40 | 48 | 60 | 72 | 80 | 100 |
| G (mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| AB (mm/s) | 0.5 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 18 | 20 | 25 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

## Size 17 Double Stack Speed Thrust Curves

※Bipolar chopper constant current drive, operating current 2.5A (RMS), screw diameter 6.35mm (Recommended Load Limit 23.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| J (mm/s) | 1.22 | 2.44 | 3.66 | 4.88 | 7.32 | 9.75 | 12.19 | 14.63 | 19.51 | 24.38 | 29.26 | 36.58 | 43.89 | 48.77 | 60.96 |
| G (mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| F (mm/s) | 0.79 | 1.59 | 2.38 | 3.18 | 4.76 | 6.35 | 7.94 | 9.53 | 12.7 | 15.88 | 19.05 | 23.81 | 28.58 | 31.75 | 39.69 |
| D (mm/s) | 0.64 | 1.27 | 1.91 | 2.54 | 3.81 | 5.08 | 6.35 | 7.62 | 10.16 | 12.7 | 15.24 | 19.05 | 22.86 | 25.4 | 31.75 |
| B (mm/s) | 0.61 | 1.22 | 1.83 | 2.44 | 3.66 | 4.88 | 6.1 | 7.32 | 9.75 | 12.19 | 14.63 | 18.29 | 21.95 | 24.38 | 30.48 |
| AB (mm/s) | 0.5 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 18 | 20 | 25 |
| N (mm/s) | 0.4 | 0.79 | 1.19 | 1.59 | 2.38 | 3.18 | 3.97 | 4.76 | 6.35 | 7.94 | 9.53 | 11.91 | 14.29 | 15.88 | 19.85 |
| A (mm/s) | 0.32 | 0.64 | 0.95 | 1.27 | 1.91 | 2.54 | 3.18 | 3.81 | 5.08 | 6.35 | 7.62 | 9.53 | 11.43 | 12.7 | 15.88 |
| AA (mm/s) | 0.3 | 0.61 | 0.91 | 1.22 | 1.83 | 2.44 | 3.05 | 3.66 | 4.88 | 6.1 | 7.32 | 9.14 | 10.97 | 12.19 | 15.24 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

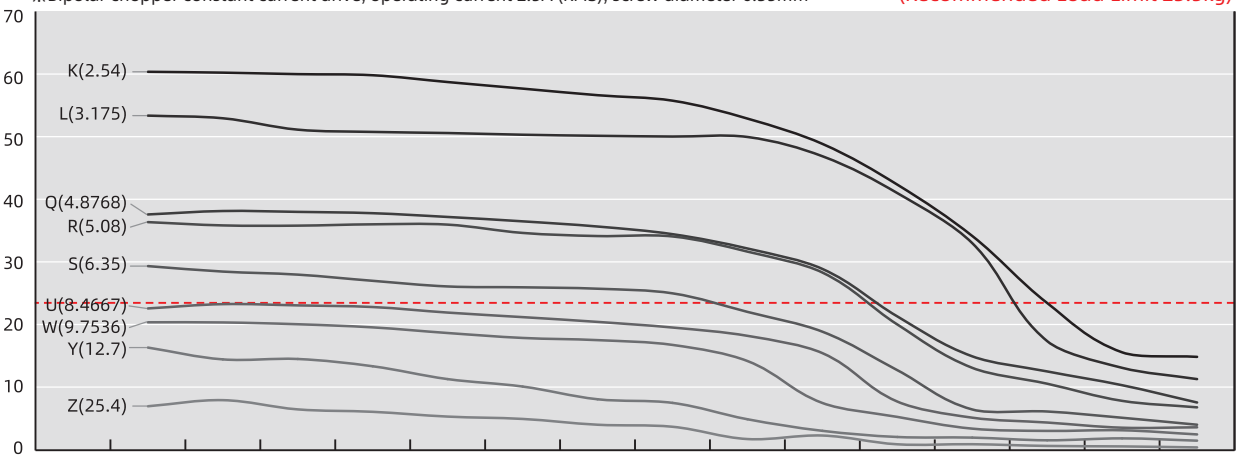
### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS2-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

# 42mm DLM / LR-DLM

## Size 17 Double Stack Speed Thrust Curves

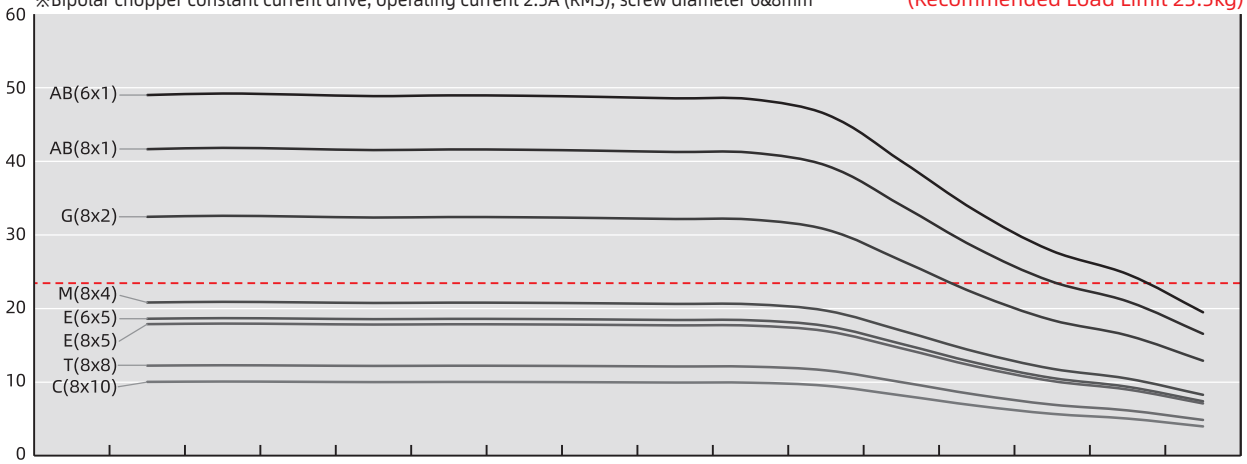
kg ※Bipolar chopper constant current drive, operating current 2.5A (RMS), screw diameter 6.35mm (Recommended Load Limit 23.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z (mm/s) | 12.7 | 25.4 | 38.1 | 50.8 | 76.2 | 101.6 | 127 | 152.4 | 203.2 | 254 | 304.8 | 381 | 457.2 | 508 | 635 |
| Y (mm/s) | 6.35 | 12.7 | 19.05 | 25.4 | 38.1 | 50.8 | 63.5 | 76.2 | 101.6 | 127 | 152.4 | 190.5 | 228.6 | 254 | 317.5 |
| W (mm/s) | 4.88 | 9.75 | 14.63 | 19.51 | 29.26 | 39.01 | 48.77 | 58.52 | 78.03 | 97.54 | 117.04 | 146.3 | 175.56 | 195.07 | 243.84 |
| U (mm/s) | 4.23 | 8.47 | 12.7 | 16.93 | 25.4 | 33.87 | 42.33 | 50.8 | 67.73 | 84.67 | 101.6 | 127 | 152.4 | 169.33 | 211.67 |
| S (mm/s) | 3.18 | 6.35 | 9.53 | 12.7 | 19.05 | 25.4 | 31.75 | 38.1 | 50.8 | 63.5 | 76.2 | 95.25 | 114.3 | 127 | 158.75 |
| R (mm/s) | 2.54 | 5.08 | 7.62 | 10.16 | 15.24 | 20.32 | 25.4 | 30.48 | 40.64 | 50.8 | 60.96 | 76.2 | 91.44 | 101.6 | 127 |
| Q (mm/s) | 2.44 | 4.88 | 7.32 | 9.75 | 14.63 | 19.51 | 24.38 | 29.26 | 39.01 | 48.77 | 58.52 | 73.15 | 87.78 | 97.54 | 121.92 |
| L (mm/s) | 1.59 | 3.18 | 4.76 | 6.35 | 9.53 | 12.7 | 15.88 | 19.05 | 25.4 | 31.75 | 38.1 | 47.63 | 57.15 | 63.5 | 79.38 |
| K (mm/s) | 1.27 | 2.54 | 3.81 | 5.08 | 7.62 | 10.16 | 12.7 | 15.24 | 20.32 | 25.4 | 30.48 | 38.1 | 45.72 | 50.8 | 63.5 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

## Size 17 Double Stack Speed Thrust Curves

kg ※Bipolar chopper constant current drive, operating current 2.5A (RMS), screw diameter 6&8mm (Recommended Load Limit 23.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| C (mm/s) | 5 | 10 | 15 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 | 150 | 180 | 200 | 250 |
| T (mm/s) | 4 | 8 | 12 | 16 | 24 | 32 | 40 | 48 | 64 | 80 | 96 | 120 | 144 | 160 | 200 |
| E (mm/s) | 2.5 | 5 | 7.5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 75 | 90 | 100 | 125 |
| M (mm/s) | 2 | 4 | 6 | 8 | 12 | 16 | 20 | 24 | 32 | 40 | 48 | 60 | 72 | 80 | 100 |
| G (mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| AB (mm/s) | 0.5 | 1 | 1.5 | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 18 | 20 | 25 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### TEST CONDITION

Testing Voltage: 24Vdc, Driver Model: DS-OLS2-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

# 57mm DLM / LR-DLM

Based on DINGS' high-precision lead screw linear actuator platform and self-developed compact linear module structure, the DLM and LR-DLM 57mm series provide compact, reliable, and high-precision linear motion solutions.

The DLM and LR-DLM 57mm series offer a wide range of stroke and lead options with extensive customization capabilities, enabling integrated customized solutions for various applications.

## Motor Characteristics

| Motor | Voltage (V) | Current (A [RMS]) | Resistance (Ω) | Inductance (mH) | Lead wires | Motor length (mm) |
|---|---|---|---|---|---|---|
| 23E2110 | 6.4 | 1.0 | 6.4 | 16.4 | 4 | 45 |
| 23E2120 | 3.2 | 2.0 | 1.75 | 4.1 | 4 | 45 |
| 23E2130 | 2.4 | 3.0 | 0.8 | 1.7 | 4 | 45 |
| 23E2210 | 10.8 | 1.0 | 11.5 | 32 | 4 | 65 |
| 23E2225 | 4.2 | 2.5 | 2.0 | 5.2 | 4 | 65 |
| 23E2240 | 2.8 | 4.0 | 0.7 | 2.0 | 4 | 65 |

## Available Lead Screw and Travel per Step

| Screw Dia. (inch) | Screw Dia. (mm) | Lead (inch) | Lead (mm) | Lead Code | Travel Per Step @1.8° (mm)* |
|---|---|---|---|---|---|
| 0.375 | 9.525 | 0.025 | 0.635 | A | 0.0032 |
| 0.375 | 9.525 | 0.05 | 1.27 | D | 0.0064 |
| 0.375 | 9.525 | 0.0625 | 1.5875 | F | 0.0079 |
| 0.375 | 9.525 | 0.083 | 2.1167 | H | 0.0106 |
| 0.375 | 9.525 | 0.1 | 2.54 | K* | 0.0127 |
| 0.375 | 9.525 | 0.125 | 3.175 | L | 0.0159 |
| 0.375 | 9.525 | 0.167 | 4.233 | P | 0.0212 |
| 0.375 | 9.525 | 0.2 | 5.08 | R | 0.0254 |
| 0.375 | 9.525 | 0.25 | 6.35 | S | 0.0318 |
| 0.375 | 9.525 | 0.375 | 9.525 | V | 0.0476 |
| 0.375 | 9.525 | 0.384 | 9.7536 | W | 0.0488 |
| 0.375 | 9.525 | 0.4 | 10.16 | X | 0.0508 |
| 0.375 | 9.525 | 0.5 | 12.7 | Y | 0.0635 |
| 0.375 | 9.525 | 1 | 25.4 | Z | 0.127 |
| 0.394 | 10 | 0.0787 | 2 | G | 0.01 |
| 0.394 | 10 | 0.3937 | 10 | C | 0.05 |
| 0.394 | 10 | 0.7874 | 20 | I | 0.1 |

* Lead code K is only available for LR-DLM 57mm

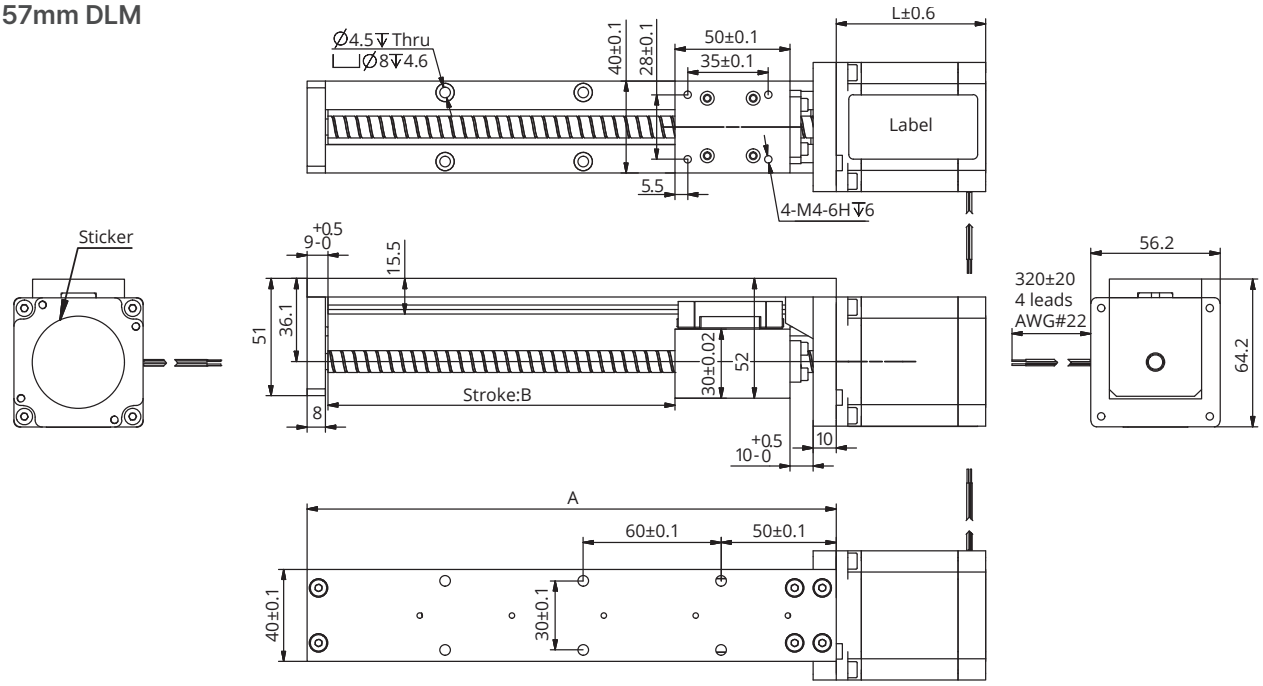
# 57mm DLM / LR-DLM

## Mechanical Specifications

| Model | C100B(dyn)(N) | Co(stat)(N) | Mro(Nm) | Mpo(Nm) | Myo(Nm) |
|---|---|---|---|---|---|
| DLM / LR-DLM 57 | 2989 | 3990 | 31.535 | 16.135 | 16.135 |

## Dimensional Drawings

### 57mm DLM



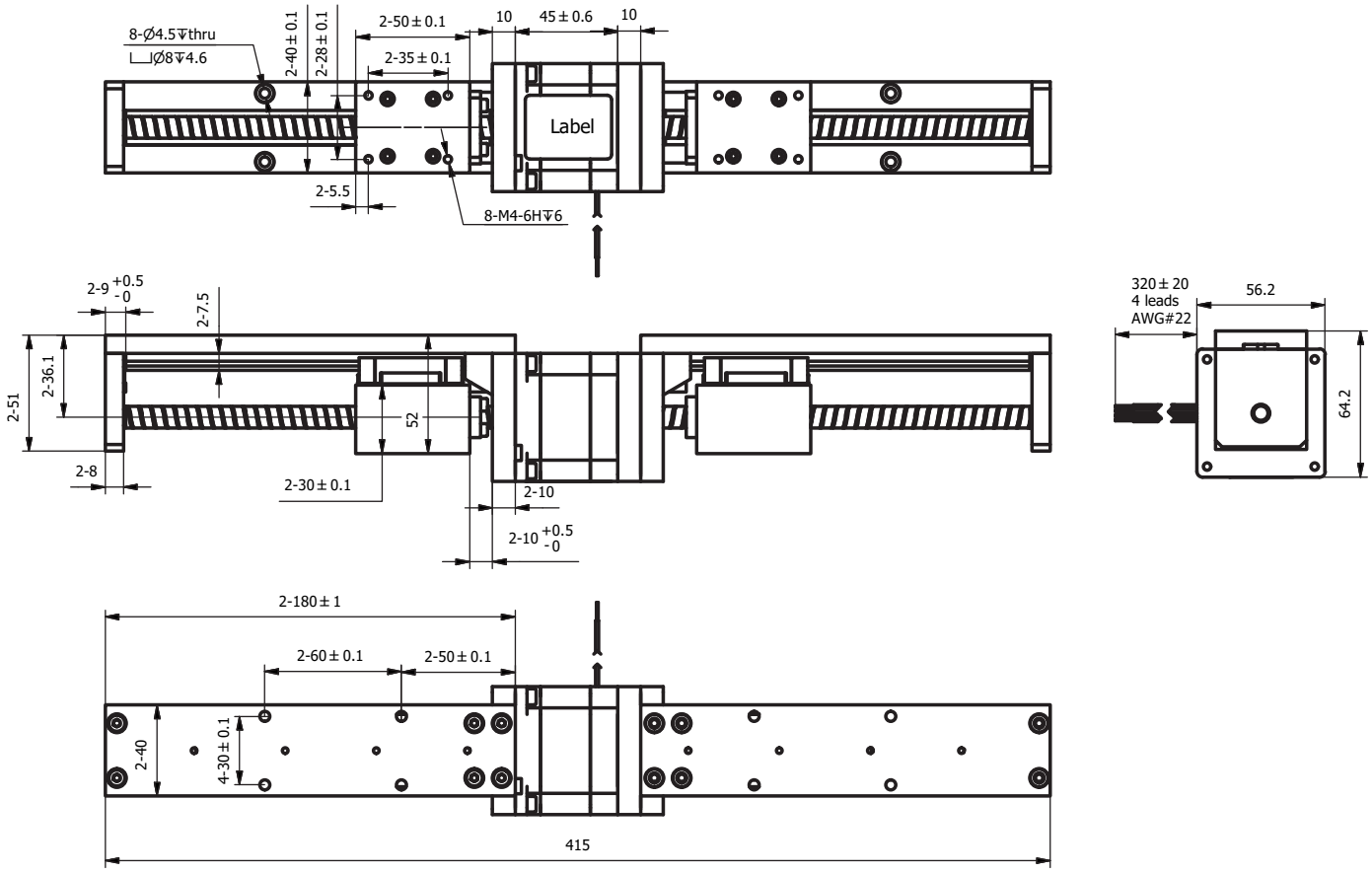

### Available Stroke Selection

| Size A (mm) | Stroke B (mm) | Weight (kg) | |
|---|---|---|---|
| | | Single stack | Double stack |
| 130 | 50 | 1.086 | 1.381 |
| 180 | 100 | 1.202 | 1.497 |
| 230 | 150 | 1.317 | 1.612 |
| 280 | 200 | 1.432 | 1.727 |
| 330 | 250 | 1.547 | 1.842 |
| 380 | 300 | 1.662 | 1.957 |
| 430 | 350 | 1.777 | 2.072 |
| 480 | 400 | 1.892 | 2.187 |
| 530 | 450 | 2.007 | 2.302 |
| 580 | 500 | 2.122 | 2.417 |
| 630 | 550 | 2.238 | 2.533 |
| 680 | 600 | 2.353 | 2.648 |

* Weight values are for reference only and may vary with actual configuration.

Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

## 57mm LR-DLM




## Available Stroke Selection

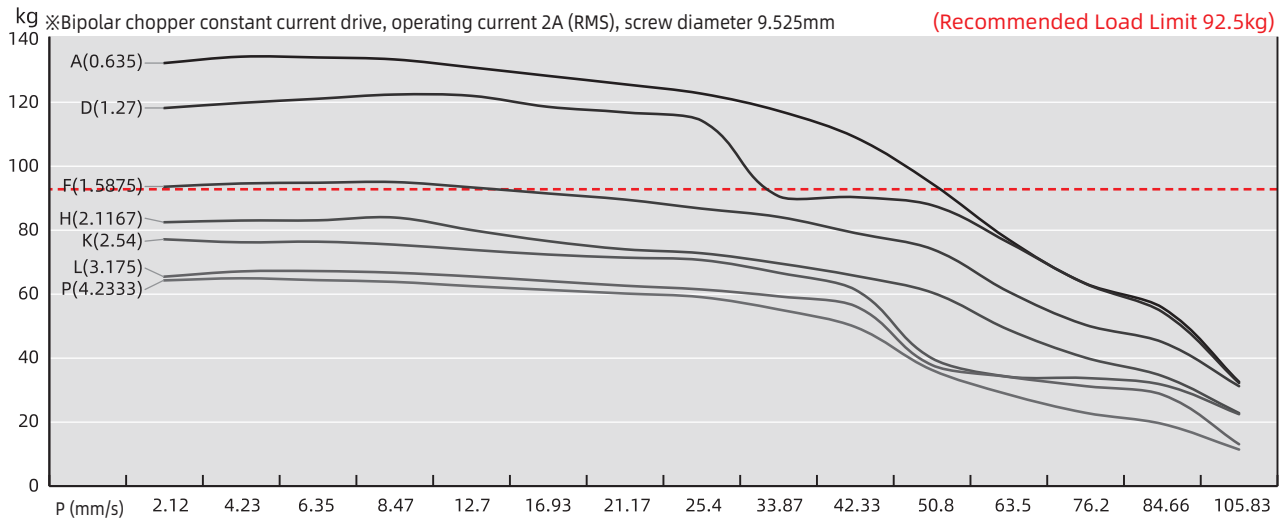
| Stroke (mm) | Single stack | | Double stack | |
|---|---|---|---|---|
| | Total Length (mm) | Weight (kg) | Total Length (mm) | Weight (kg) |
| 50 | 315 | 1.778 | 335 | 2.073 |
| 100 | 415 | 2.01 | 435 | 2.305 |
| 150 | 515 | 2.242 | 535 | 2.537 |
| 200 | 615 | 2.474 | 635 | 2.769 |
| 250 | 715 | 2.706 | 735 | 3.001 |
| 300 | 815 | 2.938 | 835 | 3.233 |
| 350 | 915 | 3.17 | 935 | 3.465 |
| 400 | 1015 | 3.402 | 1035 | 3.697 |
| 450 | 1115 | 3.634 | 1135 | 3.929 |
| 500 | 1215 | 3.866 | 1235 | 4.161 |

Note : All drawings are 1st-angle projection - ISO Compliant (3D models available)

# 57mm DLM / LR-DLM

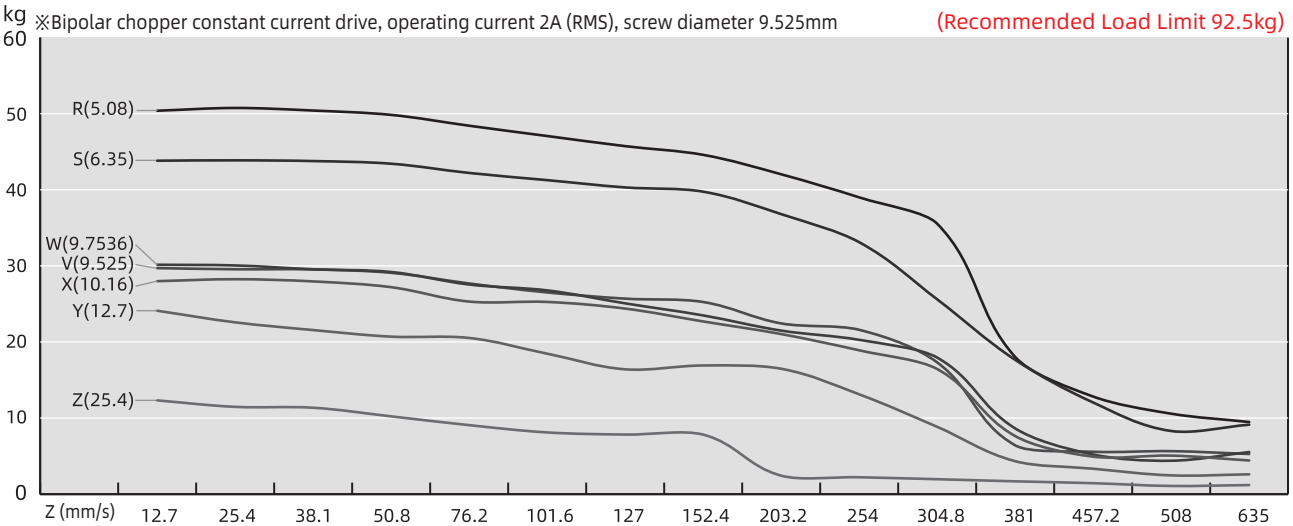
## Speed Thrust Curves

### Size 23 Single Stack Speed Thrust Curves




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P (mm/s) | 2.12 | 4.23 | 6.35 | 8.47 | 12.7 | 16.93 | 21.17 | 25.4 | 33.87 | 42.33 | 50.8 | 63.5 | 76.2 | 84.66 | 105.83 |
| L (mm/s) | 1.59 | 3.18 | 4.76 | 6.35 | 9.53 | 12.7 | 15.88 | 19.05 | 25.4 | 31.75 | 38.1 | 47.63 | 57.15 | 63.5 | 79.38 |
| K (mm/s) | 1.27 | 2.54 | 3.81 | 5.08 | 7.62 | 10.16 | 12.7 | 15.24 | 20.32 | 25.4 | 30.48 | 38.1 | 45.72 | 50.8 | 63.5 |
| H (mm/s) | 1.06 | 2.12 | 3.18 | 4.23 | 6.35 | 8.47 | 10.58 | 12.7 | 16.93 | 21.17 | 25.4 | 31.75 | 38.1 | 42.33 | 52.92 |
| F (mm/s) | 0.79 | 1.59 | 2.38 | 3.18 | 4.76 | 6.35 | 7.94 | 9.53 | 12.7 | 15.88 | 19.05 | 23.81 | 28.58 | 31.75 | 39.69 |
| D (mm/s) | 0.64 | 1.27 | 1.91 | 2.54 | 3.81 | 5.08 | 6.35 | 7.62 | 10.16 | 12.7 | 15.24 | 19.05 | 22.86 | 25.4 | 31.75 |
| A (mm/s) | 0.32 | 0.64 | 0.95 | 1.27 | 1.91 | 2.54 | 3.18 | 3.81 | 5.08 | 6.35 | 7.62 | 9.53 | 11.43 | 12.7 | 15.88 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### Size 23 Single Stack Speed Thrust Curves

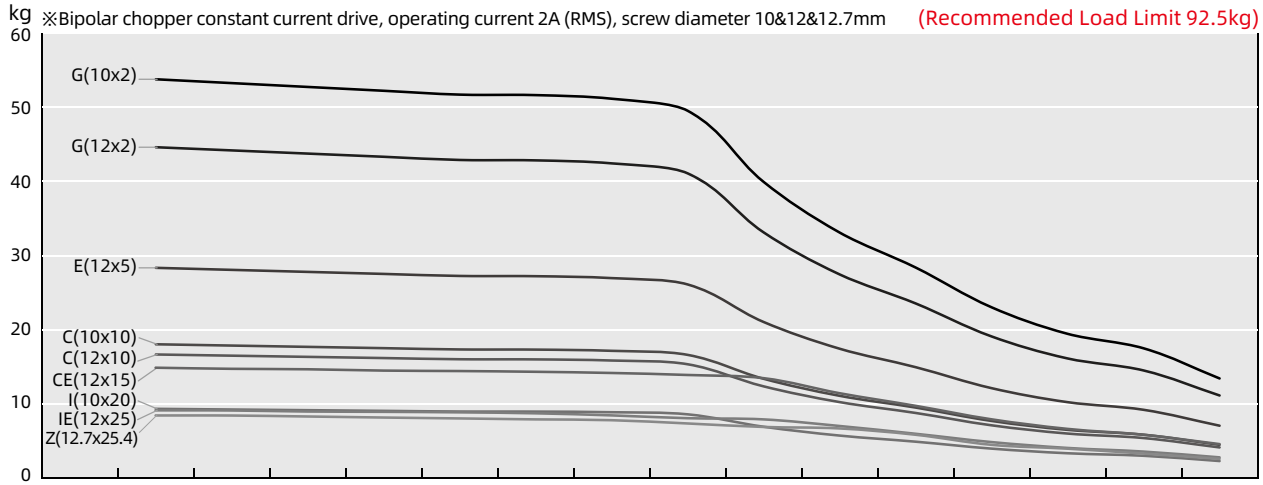



| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z (mm/s) | 12.7 | 25.4 | 38.1 | 50.8 | 76.2 | 101.6 | 127 | 152.4 | 203.2 | 254 | 304.8 | 381 | 457.2 | 508 | 635 |
| Y (mm/s) | 6.35 | 12.7 | 19.05 | 25.4 | 38.1 | 50.8 | 63.5 | 76.2 | 101.6 | 127 | 152.4 | 190.5 | 228.6 | 254 | 317.5 |
| X (mm/s) | 5.08 | 10.16 | 15.24 | 20.32 | 30.48 | 40.64 | 50.8 | 60.96 | 81.28 | 101.6 | 121.92 | 152.4 | 182.88 | 203.2 | 254 |
| W (mm/s) | 4.88 | 9.75 | 14.63 | 19.51 | 29.26 | 39.01 | 48.77 | 58.52 | 78.03 | 97.54 | 117.04 | 146.3 | 175.56 | 195.07 | 243.84 |
| V (mm/s) | 4.76 | 9.53 | 14.29 | 19.05 | 28.58 | 38.1 | 47.63 | 57.15 | 76.2 | 95.25 | 114.3 | 142.88 | 171.45 | 190.5 | 238.13 |
| S (mm/s) | 3.18 | 6.35 | 9.53 | 12.7 | 19.05 | 25.4 | 31.75 | 38.1 | 50.8 | 63.5 | 76.2 | 95.25 | 114.3 | 127 | 158.75 |
| R (mm/s) | 2.54 | 5.08 | 7.62 | 10.16 | 15.24 | 20.32 | 25.4 | 30.48 | 40.64 | 50.8 | 60.96 | 76.2 | 91.44 | 101.6 | 127 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### TEST CONDITION

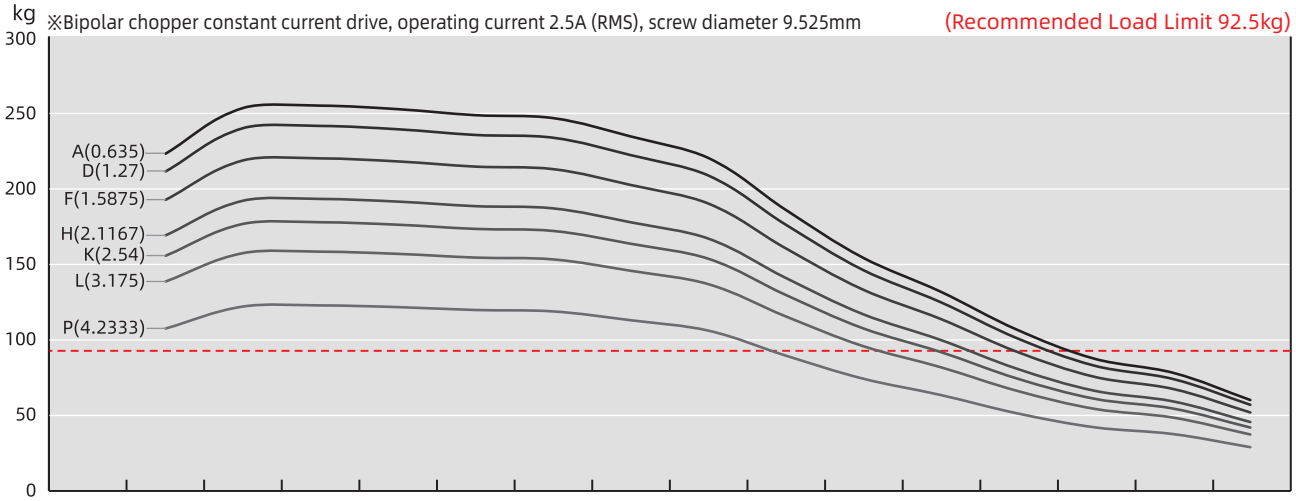
Testing Voltage: 48Vdc, Driver Model: DS-OLS4-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

## Size 23 Single Stack Speed Thrust Curves




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z(mm/s) | 12.7 | 25.4 | 38.1 | 50.8 | 76.2 | 101.6 | 127 | 152.4 | 203.2 | 254 | 304.8 | 381 | 457.2 | 508 | 635 |
| IE(mm/s) | 12.5 | 25 | 37.5 | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 375 | 450 | 500 | 625 |
| I(mm/s) | 10 | 20 | 30 | 40 | 60 | 80 | 100 | 120 | 160 | 200 | 240 | 300 | 360 | 400 | 500 |
| CE(mm/s) | 7.5 | 15 | 22.5 | 30 | 45 | 60 | 75 | 90 | 120 | 150 | 180 | 225 | 270 | 300 | 375 |
| C(mm/s) | 5 | 10 | 15 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 | 150 | 180 | 200 | 250 |
| E(mm/s) | 2.5 | 5 | 7.5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 75 | 90 | 100 | 125 |
| G(mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

## Size 23 Double Stack Speed Thrust Curves




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| P (mm/s) | 2.12 | 4.23 | 6.35 | 8.47 | 12.7 | 16.93 | 21.17 | 25.4 | 33.87 | 42.33 | 50.8 | 63.5 | 76.2 | 84.66 | 105.83 |
| L (mm/s) | 1.59 | 3.18 | 4.76 | 6.35 | 9.53 | 12.7 | 15.88 | 19.05 | 25.4 | 31.75 | 38.1 | 47.63 | 57.15 | 63.5 | 79.38 |
| K (mm/s) | 1.27 | 2.54 | 3.81 | 5.08 | 7.62 | 10.16 | 12.7 | 15.24 | 20.32 | 25.4 | 30.48 | 38.1 | 45.72 | 50.8 | 63.5 |
| H (mm/s) | 1.06 | 2.12 | 3.18 | 4.23 | 6.35 | 8.47 | 10.58 | 12.7 | 16.93 | 21.17 | 25.4 | 31.75 | 38.1 | 42.33 | 52.92 |
| F (mm/s) | 0.79 | 1.59 | 2.38 | 3.18 | 4.76 | 6.35 | 7.94 | 9.53 | 12.7 | 15.88 | 19.05 | 23.81 | 28.58 | 31.75 | 39.69 |
| D (mm/s) | 0.64 | 1.27 | 1.91 | 2.54 | 3.81 | 5.08 | 6.35 | 7.62 | 10.16 | 12.7 | 15.24 | 19.05 | 22.86 | 25.4 | 31.75 |
| A (mm/s) | 0.32 | 0.64 | 0.95 | 1.27 | 1.91 | 2.54 | 3.18 | 3.81 | 5.08 | 6.35 | 7.62 | 9.53 | 11.43 | 12.7 | 15.88 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

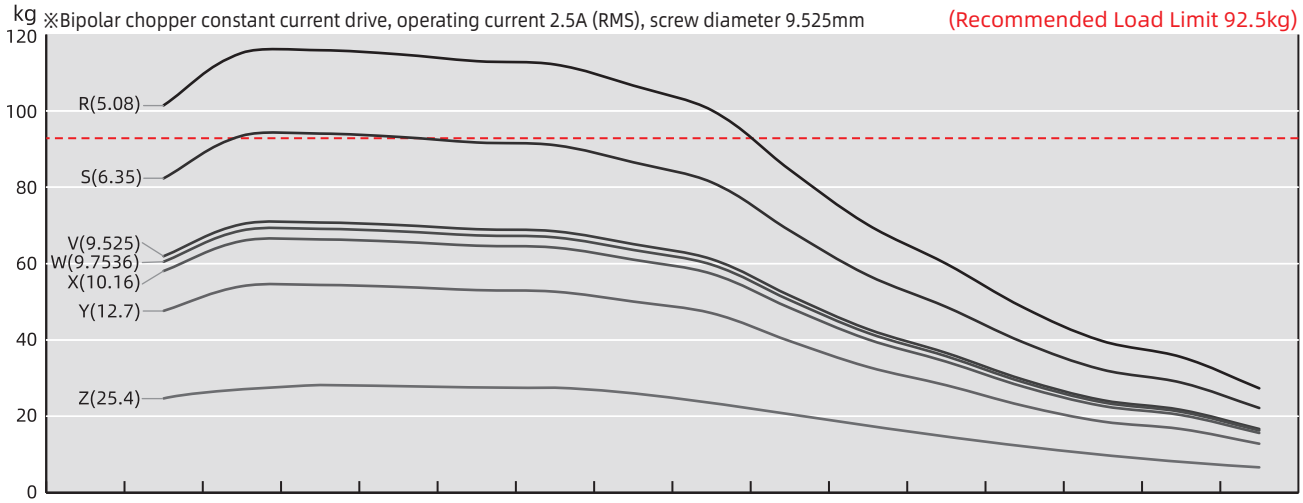
### TEST CONDITION

Testing Voltage: 48Vdc, Driver Model: DS-OLS4-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

# 57mm DLM / LR-DLM

## Size 23 Double Stack Speed Thrust Curves

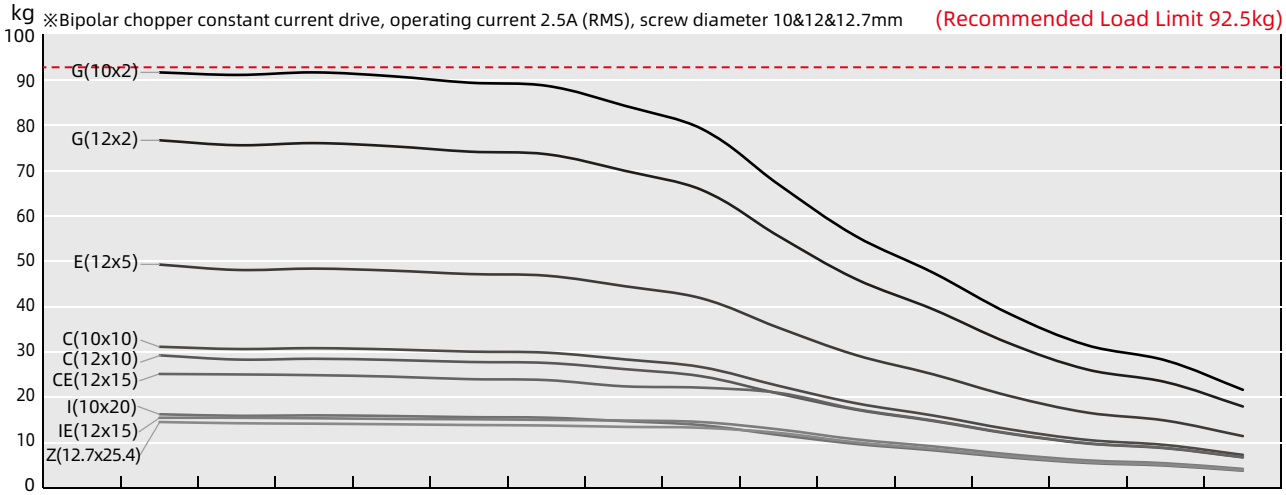
kg ※Bipolar chopper constant current drive, operating current 2.5A (RMS), screw diameter 9.525mm (Recommended Load Limit 92.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z (mm/s) | 12.7 | 25.4 | 38.1 | 50.8 | 76.2 | 101.6 | 127 | 152.4 | 203.2 | 254 | 304.8 | 381 | 457.2 | 508 | 635 |
| Y (mm/s) | 6.35 | 12.7 | 19.05 | 25.4 | 38.1 | 50.8 | 63.5 | 76.2 | 101.6 | 127 | 152.4 | 190.5 | 228.6 | 254 | 317.5 |
| X (mm/s) | 5.08 | 10.16 | 15.24 | 20.32 | 30.48 | 40.64 | 50.8 | 60.96 | 81.28 | 101.6 | 121.92 | 152.4 | 182.88 | 203.2 | 254 |
| W (mm/s) | 4.88 | 9.75 | 14.63 | 19.51 | 29.26 | 39.01 | 48.77 | 58.52 | 78.03 | 97.54 | 117.04 | 146.3 | 175.56 | 195.07 | 243.84 |
| V (mm/s) | 4.76 | 9.53 | 14.29 | 19.05 | 28.58 | 38.1 | 47.63 | 57.15 | 76.2 | 95.25 | 114.3 | 142.88 | 171.45 | 190.5 | 238.13 |
| S (mm/s) | 3.18 | 6.35 | 9.53 | 12.7 | 19.05 | 25.4 | 31.75 | 38.1 | 50.8 | 63.5 | 76.2 | 95.25 | 114.3 | 127 | 158.75 |
| R (mm/s) | 2.54 | 5.08 | 7.62 | 10.16 | 15.24 | 20.32 | 25.4 | 30.48 | 40.64 | 50.8 | 60.96 | 76.2 | 91.44 | 101.6 | 127 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

## Size 23 Double Stack Speed Thrust Curves

kg ※Bipolar chopper constant current drive, operating current 2.5A (RMS), screw diameter 10&12&12.7mm (Recommended Load Limit 92.5kg)




| | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Z(mm/s) | 12.7 | 25.4 | 38.1 | 50.8 | 76.2 | 101.6 | 127 | 152.4 | 203.2 | 254 | 304.8 | 381 | 457.2 | 508 | 635 |
| IE(mm/s) | 12.5 | 25 | 37.5 | 50 | 75 | 100 | 125 | 150 | 200 | 250 | 300 | 375 | 450 | 500 | 625 |
| I(mm/s) | 10 | 20 | 30 | 40 | 60 | 80 | 100 | 120 | 160 | 200 | 240 | 300 | 360 | 400 | 500 |
| CE(mm/s) | 7.5 | 15 | 22.5 | 30 | 45 | 60 | 75 | 90 | 120 | 150 | 180 | 225 | 270 | 300 | 375 |
| C(mm/s) | 5 | 10 | 15 | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 120 | 150 | 180 | 200 | 250 |
| E(mm/s) | 2.5 | 5 | 7.5 | 10 | 15 | 20 | 25 | 30 | 40 | 50 | 60 | 75 | 90 | 100 | 125 |
| G(mm/s) | 1 | 2 | 3 | 4 | 6 | 8 | 10 | 12 | 16 | 20 | 24 | 30 | 36 | 40 | 50 |
| Speed r/min | 30 | 60 | 90 | 120 | 180 | 240 | 300 | 360 | 480 | 600 | 720 | 900 | 1080 | 1200 | 1500 |
| Pulse pps | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | 1600 | 2000 | 2400 | 3000 | 3600 | 4000 | 5000 |

### TEST CONDITION

Testing Voltage: 48Vdc, Driver Model: DS-OLS4-FPD bipolar, chopper driver at rated current (rms).
Motor thrust may vary depending on voltage and driver conditions. 50% thrust margin is recommended.

DINGS'
Precision Motion Specialist

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