

## LINEAR ACTUATOR RD-398C



## Product Specifications

# LINEAR ACTUATOR RD-398C

### Product characteristics

- RD-398C is a Linear actuator with quick release function,  
The following models are available:  
398C 0 6 4D5 24 888/888 B Zn 01 E 02 0 05 1D5
- It is characterized by small size, high accuracy and complete synchronization,  
good self-locking performance, sanitary, direct motor drive.  
High protection grade IP54 and low noise;  
Applicable to household electric beds, medical electric  
beds, beauty beds, dental chairs, or related  
automated industrial machinery.



### Features and options

- Maximum thrust: 1000N 2000N 3000N 4000N 6000N
- Maximum tension: 600N 1500N 2000N 3000N 5000N
- Color: White / Black
- Protection grade: IP54
- Stroke length: 100 / 150 / 200 / 250 / 300 / 350 / 400mm. Special stroke can be customized
- Installation dimension: minimum installation distance (L)  $\geq$  150 + stroke (s) + safety distance (c)
 

|                                           |                                           |
|-------------------------------------------|-------------------------------------------|
| $L = S + 150$ ( $40 < S \leq 200$ )       | $L = S + 150 + 5$ ( $200 < S \leq 250$ )  |
| $L = S + 150 + 10$ ( $250 < S \leq 300$ ) | $L = S + 150 + 15$ ( $300 < S \leq 350$ ) |
| $L = S + 150 + 20$ ( $350 < S \leq 400$ ) | $L = S + 150 + 25$ ( $300 < S \leq 450$ ) |
| $L = S + 150 + 30$ ( $450 < S \leq 500$ ) | $L = S + 150 + 35$ ( $300 < S \leq 550$ ) |
| $L = S + 150 + 40$ ( $550 < S \leq 600$ ) |                                           |
- Noise level:  $\leq 48\text{dB}$  (a) (ambient noise  $\leq 40\text{dB}$ )
- Quick release function: Standard
- Safety nut: optional
- Single Hall feedback: optional
- Built in electronic limit switch
- Weight: about 3 kg (different stroke/ installation distance, weight difference)
- Static bending moment: lateral load is not allowed

### Use:

- Working duty ratio: 10%; Continuous use for 2 minutes, rest for 18 minutes
- Service temperature: 5-40 °C
- Storage temperature: - 5-45 °C
- Supporting controller: optional Runda conventional controller
- Relative humidity: 20% - 90% at 30 °C, non condensing
- Atmospheric pressure: 700-1060hpa

### Certificate

- EN60601-1/EN60601-1-2 & ROHS2.0

### Technical Parameter

| Voltage<br>(V) | Lead<br>(mm) | Maximum load<br>(N) | Self-locking force<br>(N) | No load speed<br>(mm/s) | Load speed<br>(mm/s) | Load speed<br>(A) |
|----------------|--------------|---------------------|---------------------------|-------------------------|----------------------|-------------------|
| 24             | 10           | 1000                | 600                       | 20                      | 13.5                 | 5                 |
| 29             | 10           | 1000                | 600                       | 23                      | 16                   | 5                 |
| 24             | 7.5          | 2000                | 1500                      | 14                      | 10                   | 5                 |
| 29             | 7.5          | 2000                | 1500                      | 17.5                    | 13                   | 5                 |
| 24             | 7.5          | 3000                | 2000                      | 10.5                    | 6.5                  | 4                 |
| 29             | 7.5          | 3000                | 2000                      | 13                      | 9                    | 4.5               |
| 24             | 5            | 4000                | 3000                      | 8.5                     | 6.0                  | 6.5               |
| 29             | 5            | 4000                | 3000                      | 10.5                    | 7.5                  | 6.5               |
| 24             | 4            | 6000                | 5000                      | 7                       | 4                    | 6.5               |
| 29             | 4            | 6000                | 5000                      | 8.5                     | 5.5                  | 6.5               |

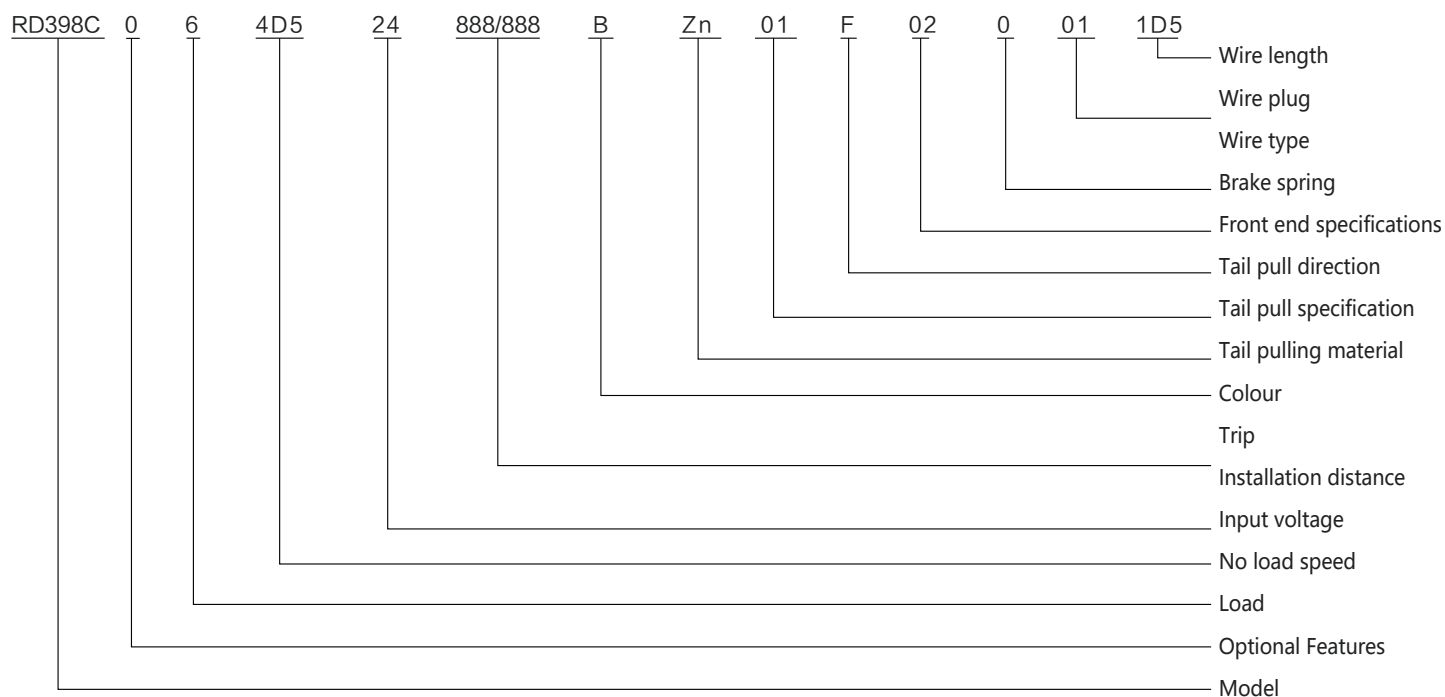
Note: the above data is the average value of test data at room temperature of 25 °C

## Naming rules example

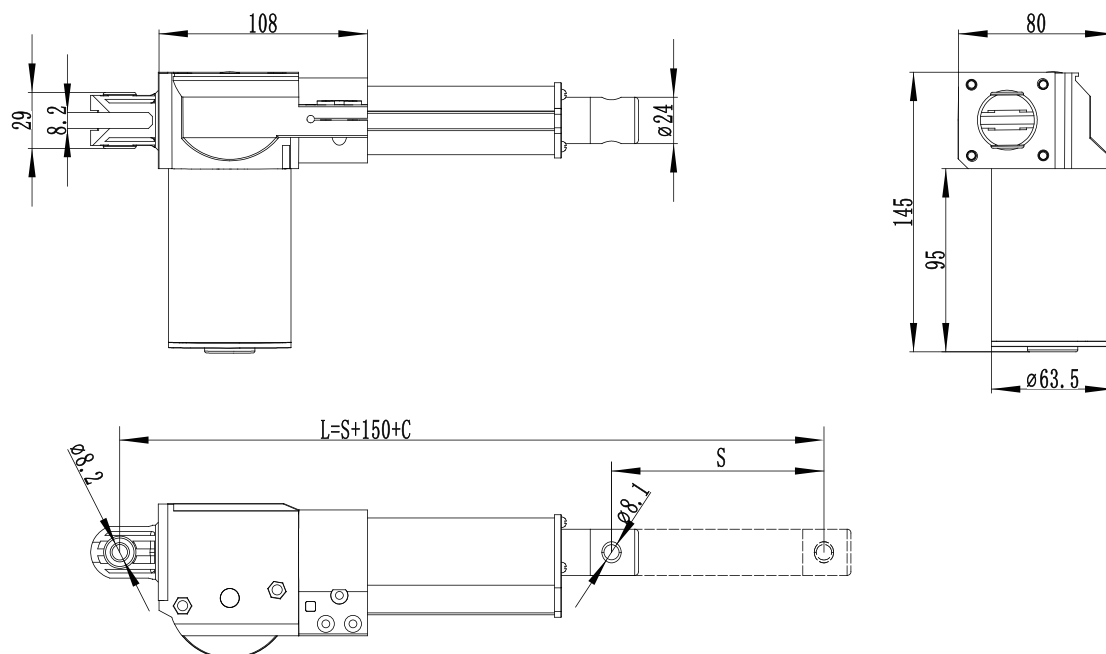
|                                |        |                                                                                                                                                                                                                              |
|--------------------------------|--------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model                          | RD398C |                                                                                                                                                                                                                              |
| Optional function              |        | 0=Standard G=With reed pipe P=Anti pinch hand                                                                                                                                                                                |
| Load                           |        | 1=1000N 2=2000N 3=3000N 4=4000N 6=6000N                                                                                                                                                                                      |
| No-load speed*D*               |        | 4-15mm/s ( Example: 4D=4mm/s 、 4D5=4.5mm/s)                                                                                                                                                                                  |
| Input voltage                  |        | 24=24VDC 29=29VDC                                                                                                                                                                                                            |
| Stroke / Installation distance |        | Stroke=XXX / Installation distance=XXX                                                                                                                                                                                       |
| Color                          |        | A=White B=Black                                                                                                                                                                                                              |
| Tail pull material             |        | Zn=Kirsite Fe=Iron                                                                                                                                                                                                           |
| Tail pull specification        |        | 01=Groove width8.2, groove depth32, hole diameter of cushion sleeve8.1<br>02=Groove width8.2, groove depth32, hole diameter of cushion sleeve10.1<br>03=Groove width8.2, groove depth32, hole diameter of cushion sleeve10.2 |
| Tail pull direction            |        | E=90° F=0°                                                                                                                                                                                                                   |
| Front end specification        |        | 00=No iron head 01= Front iron head slotted 02= Front iron head not slotted                                                                                                                                                  |
| Brake spring                   |        | 0=No brake function 1=Brake function                                                                                                                                                                                         |
| Wire plug<br>Wire type         |        | 01=2-core 4-pin straight line insertion                                                                                                                                                                                      |
| Wire length*D*                 |        | Example 1D5=1.5m 、 2D0=2.0m                                                                                                                                                                                                  |

RD398C

## 示例



## Product dimension drawing

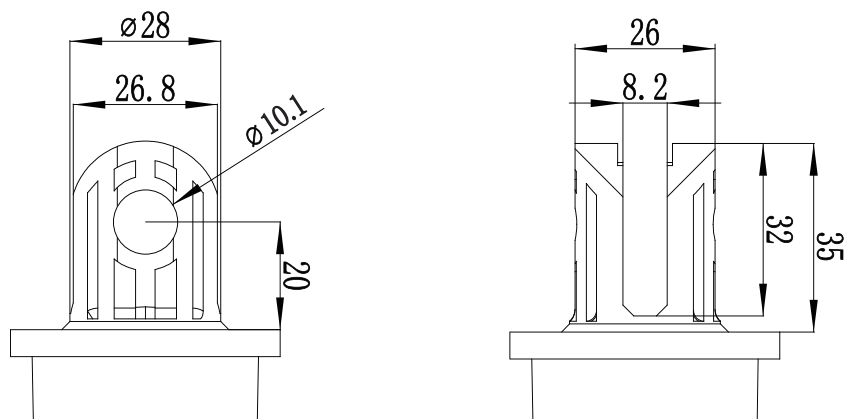


$L = 150\text{mm} + \text{stroke (S)} + \text{safety distance (C)}$

| Stroke S (mm)      | Safe distance C (mm) |
|--------------------|----------------------|
| $40 < S \leq 110$  | --                   |
| $111 < S \leq 200$ | --                   |
| $200 < S \leq 250$ | 5                    |
| $250 < S \leq 300$ | 10                   |
| $300 < S \leq 350$ | 15                   |
| $350 < S \leq 400$ | 20                   |
| $400 < S \leq 450$ | 25                   |
| $450 < S \leq 500$ | 30                   |
| $500 < S \leq 550$ | 35                   |
| $550 < S \leq 600$ | 40                   |

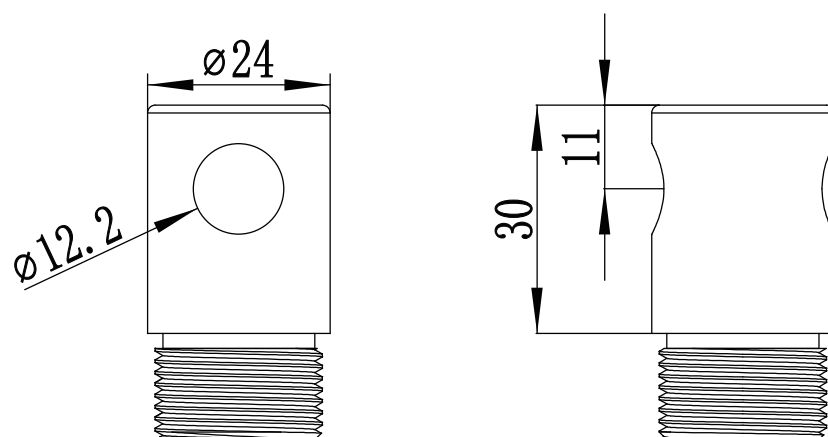
## Pulling head dimension drawing

Tail Pull:

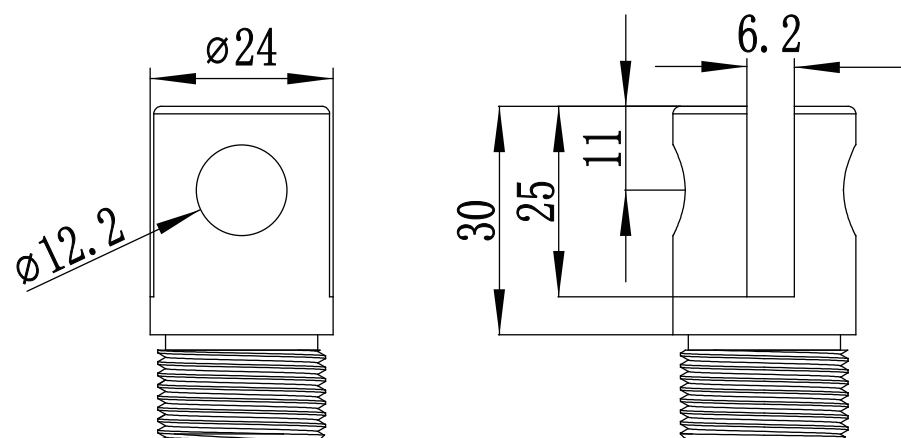


Front Pull:

front end no slotting:

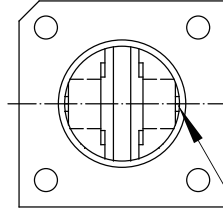
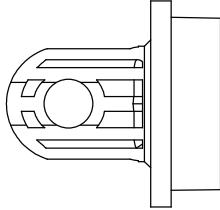


Front end slotting:



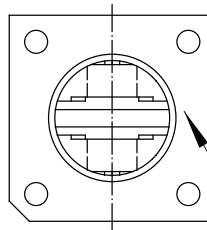
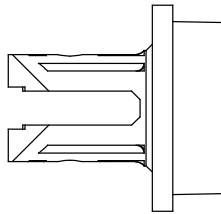
Tail pull direction

$F=0^\circ$



The through hole  
centerline is parallel  
to the ground

$E=90^\circ$

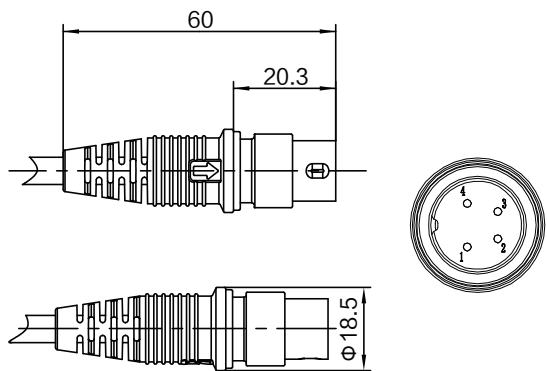


The through hole  
centerline is perpendicular  
to the ground

**Motor line**

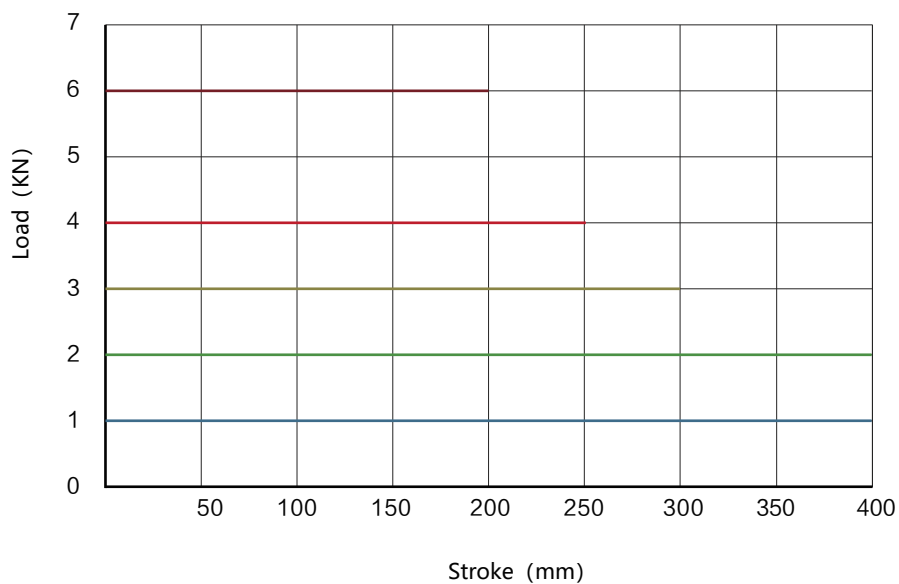
Motor line: 2P4Z

2-core 4-pin straight line insertion



| 2-core 4-pin straight line insertion |       |                      |
|--------------------------------------|-------|----------------------|
| PINS                                 | Color | Function             |
| 1                                    | NG    | Not connected        |
| 2                                    | Brown | Motor positive stage |
| 3                                    | Blue  | Motor negative stage |
| 4                                    | NG    | Not connected        |
| Outer ring                           | NG    | Not connected        |

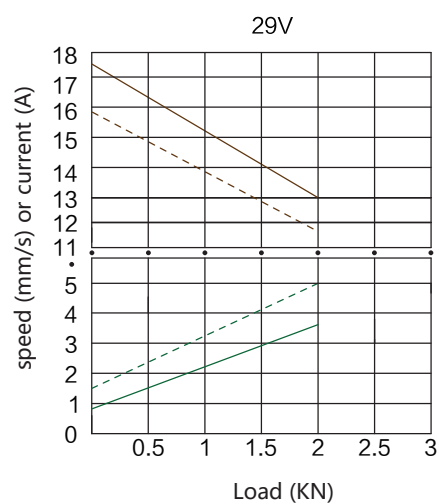
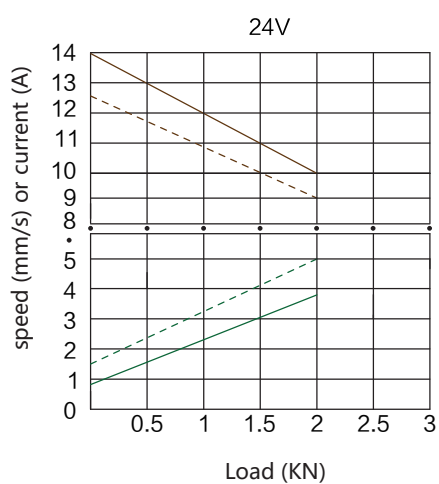
## Relationship between stroke and load



## Characteristic curve

RD-398C 1000N current, speed and load relationship diagram

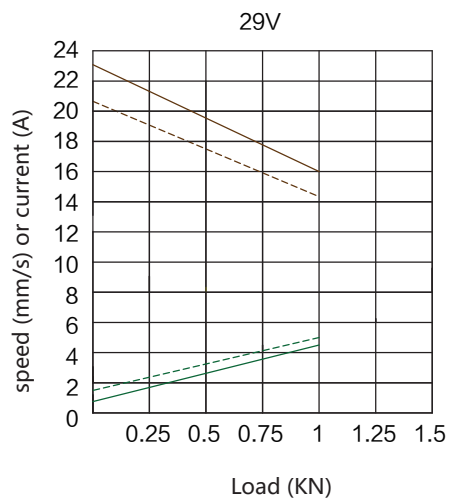
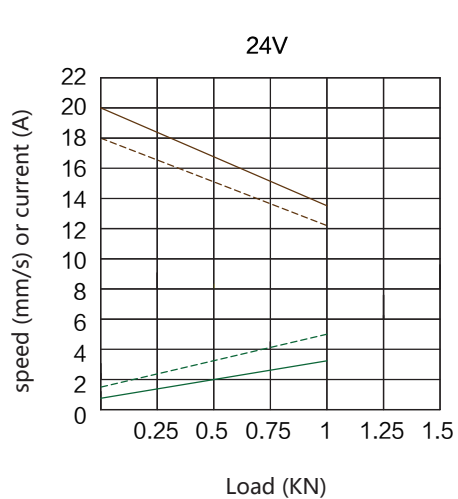
Typical speed — Minimum speed - - - Typical current — Maximum current - - -



## Characteristic curve

RD-398C 2000N current, speed and load relationship diagram

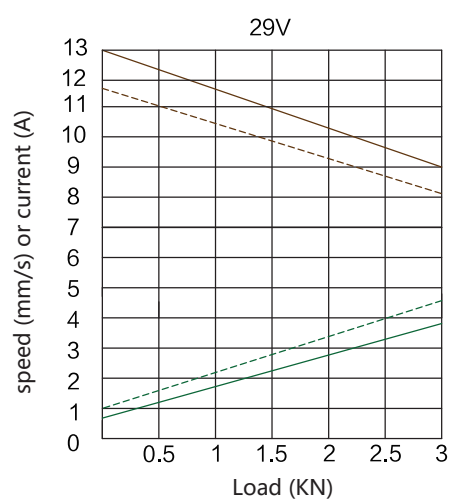
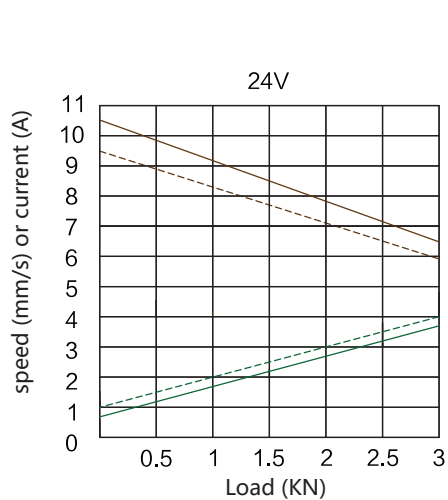
Typical speed — Minimum speed - - - - - Typical current — Maximum current - - - - -



## Characteristic curve

RD-398C 3000N current, speed and load relationship diagram

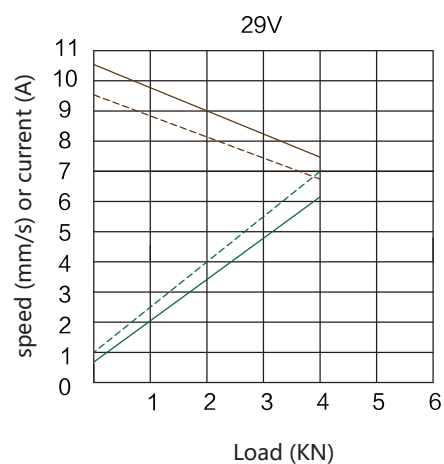
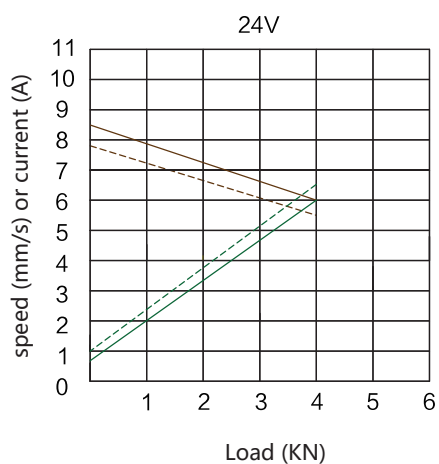
Typical speed — Minimum speed - - - - - Typical current — Maximum current - - - - -



## Characteristic curve

RD-398C 4000N current, speed and load relationship diagram

Typical speed ——— Minimum speed - - - - - Typical current ——— Maximum current - - - - -



## Characteristic curve

RD-398C 6000N current, speed and load relationship diagram

Typical speed ——— Minimum speed - - - - - Typical current ——— Maximum current - - - - -

