

# HD Motor Linear Type

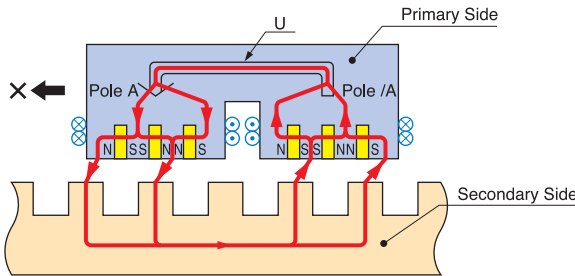
HD Motor Linear Type/HDL Series

Capable of heavy load  
high-precision  
transportation with  
strong thrust motor.

### Operation

#### Magnet Circuit of the HD Motor Linear Type

Unique magnetic circuit with embedded high performance permanent magnet offers strong magnetic flux and creates higher thrust than other linear motors.



### Features

#### Notable Thrust

Standard lineup generates thrust up to 1700N.

#### Low Heat Generation

Continuous high thrust output enables low heat generation.  
High frequency operation maintained without anxiety.

#### Compact in size

Compact size comes from the high thrust per unit area.

#### High Precision

Optical encoder utilizes high precision positioning.

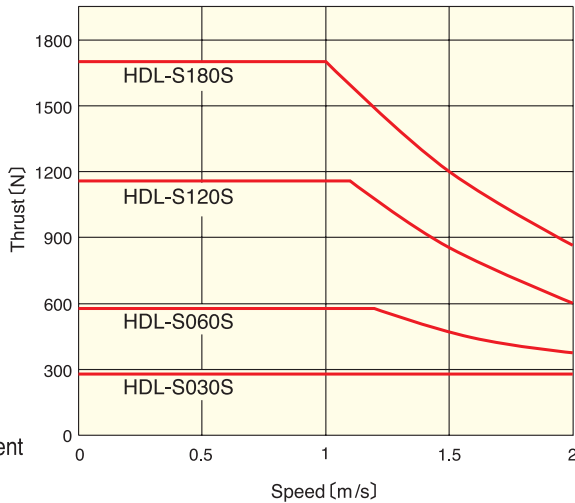
#### Magnet-less Stator

Unique magnetic circuit removes permanent magnets from the stator side. (See P.2 Structure Comparison)

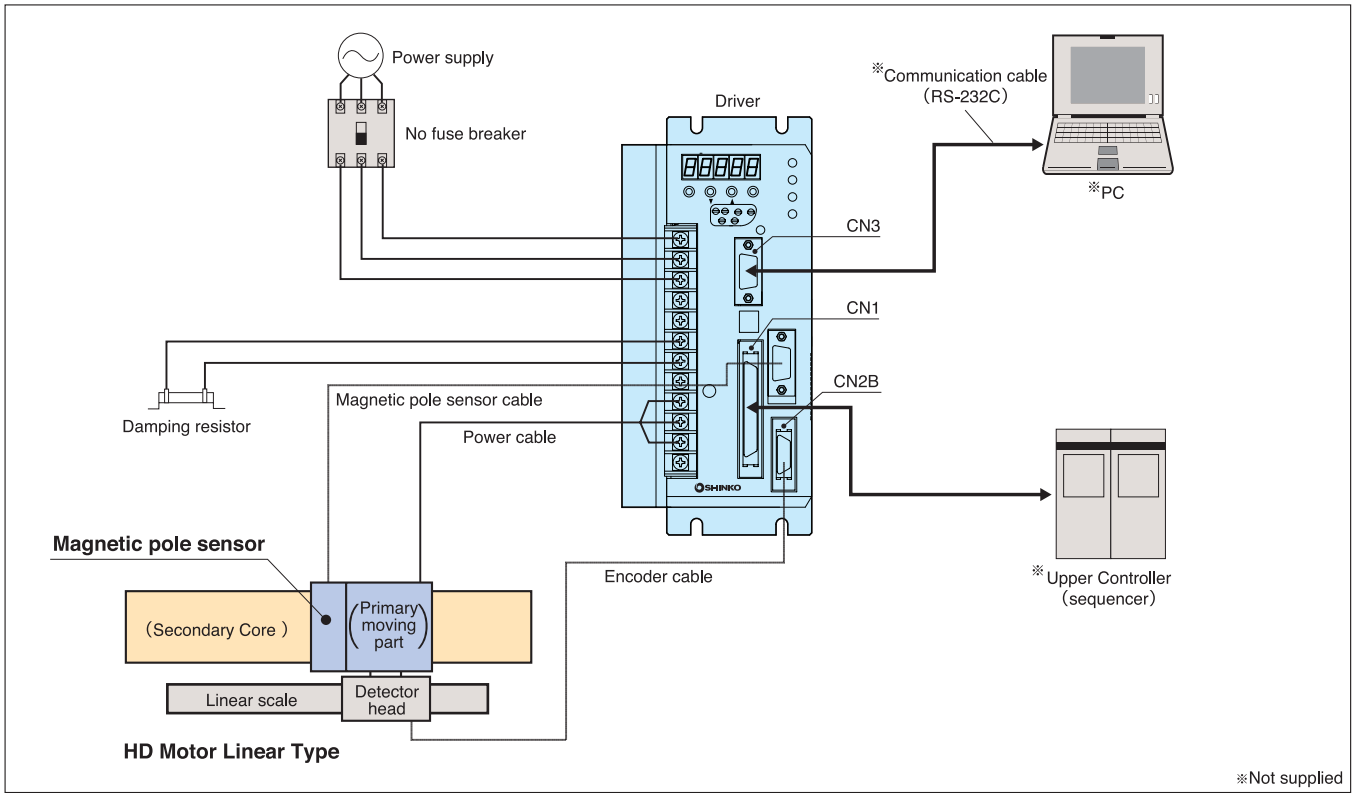
### Applications

- Placement of large and heavy loads—FPD manufacturing equipment
- High precision positioning—Semiconductor manufacturing equipment
- High frequency operation—Chip mount, bonder, etc.

### Characteristics



### System configuration



### Comparing Structure

Name	HD Motor Linear Type	PM Linear motor	Coreless Linear Motor
Structural Drawing			
Movable Unit	Slit form permanent magnets are placed in the space where the laminated core forms, and it equips the winding.	Laminated core is equipped with the winding.	Without a core, the winding is molded by plastics.
Stator	Blocks of laminated core are lined up, and the grooves are molded with plastics.	On the plate, the plate form permanent magnet is arranged by the number of strokes.	On the plate, the plate form permanent magnet is arranged by the number of strokes and two plates are arranged facing each other.
Permanent Magnet	Not Exposed	Exposed	Exposed

### Model designations

Linear Type

HDL - S120S -

Motor Type

Maximum Thrust

Serial Number

S030S	280N
S060S	580N
S120S	1150N
S180S	1700N

Rotary Type

HDM - 1240 M E -

Motor Type

Max. Torque (see right table)

Detector Type

Motor frame number

Serial Number

None: Resolver type

E: Encoder type

M, L, H

1005	50Nm
1010	100Nm
1020	200Nm
1050	500Nm
1080	800Nm
1100	1000Nm
1120	1200Nm
1200	2000Nm
1240	2400Nm
※ 2020	200Nm

※Aluminum frame type