

HLE-RB Series

Features

- ❑ Standard travel up to 9 meters*
- ❑ Load Capacities up to 600 kg
- ❑ $\pm 0,1$ mm positional repeatability
- ❑ Timing belt and pulley drive mechanism for fast, accurate positioning
- ❑ Roller wheel bearings for smooth high speed linear motion
- ❑ IP30 strip seal



*Longer travels available with splice kits.

Housing:

Lightweight and self-supporting aluminum profiles are offered in four sizes:

HLE60: 60 x 60 mm

HLE80: 80 x 80 mm

HLE100: 100 x 100 mm

HLE150: 150 x 150 mm

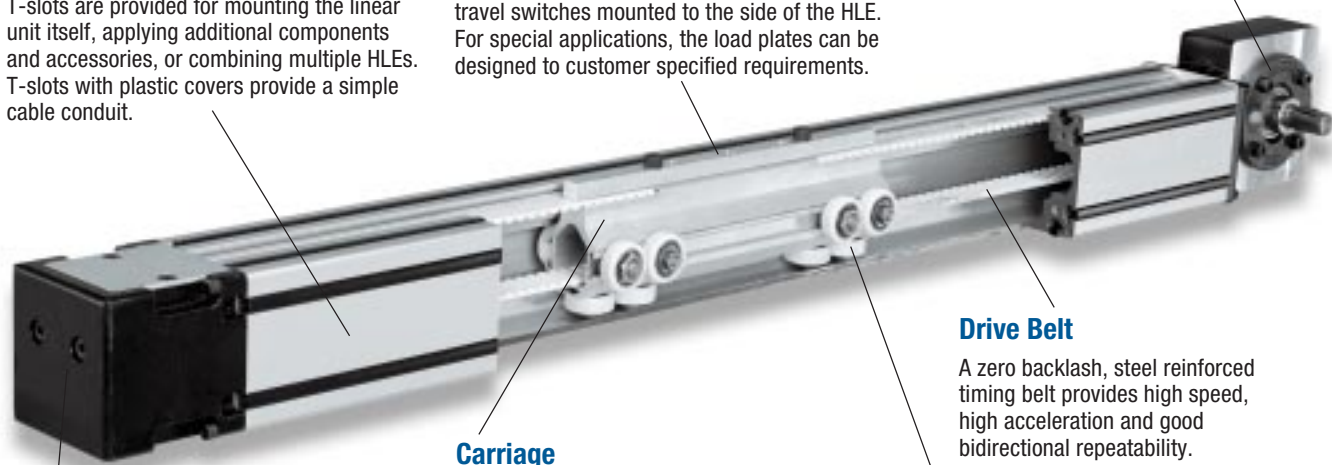
T-slots are provided for mounting the linear unit itself, applying additional components and accessories, or combining multiple HLEs. T-slots with plastic covers provide a simple cable conduit.

Load Attachment Plate

Load attachment plates are available for every type of carriage. With integral T-slots or tapped with holes in a standard mounting pattern, they allow easy mounting of your load to the carriage of the HLE. Multiple HLEs can easily be mounted together by using standard clamping profiles. Tripping plates are mounted to the side of the load attachment plate to activate home or end of travel switches mounted to the side of the HLE. For special applications, the load plates can be designed to customer specified requirements.

Drive Station

Rigid cast housing with standard flanges for a variety of gearboxes. The drive stations are designed to accept planetary and worm gear reducers or provide different shaft outputs for driving the HLE.



Tensioning Station

"Easy access" tensioning bolts allow external adjustment of belt tension.

Carriage

Roller bearing wheels are installed on three sides of the carriage to provide smooth linear motion and support. The wheels are positioned to evenly distribute the load across the length of the carriage. Eccentric bearing wheel bushings are adjusted to eliminate play on all sides of the carriage. Due to a low coefficient of friction, the carriage design provides a high mechanical efficiency and long service life. The carriages are available in standard and extended lengths. Special carriage lengths and linear units with multiple carriages are available for custom applications.

Drive Belt

A zero backlash, steel reinforced timing belt provides high speed, high acceleration and good bidirectional repeatability.

Roller Bearing

Each wheel consists of a lubricated and sealed radial ball bearing to reduce friction and maintenance. The bearing is enclosed within a tough polyamide tread to reduce noise and provide long service life.

IP30 Strip Seal

Magnetically attached stainless steel seal strip (not shown in this illustration) provides environmental protection to interior components.

HLE-RB Series

High speed, high acceleration, and long travel are combined with stiff, rigid construction characteristics, to make the HLE-RB family of products ideal as single axis products or as components for high speed multi-axis gantries. With **thousands of units in operation worldwide the HLEs are proven performers** offering long life and trouble-free operation.

Construction: The HLE Linear Module consists of a lightweight carriage which can be precisely positioned within an extruded aluminum housing by a timing belt and pulley drive system. The housing, constructed from extruded aluminum with a square cross sectional geometry, demonstrates excellent deflection characteristics. The protective “anolite” coating provides durability as well as an attractive silver appearance. It includes T-slots along its entire length

for flexible mounting. The drive mechanism is a zero backlash steel reinforced timing belt. The tension station, conveniently located at the end of the unit provides for quick and easy belt adjustment. The drive station is designed to accept planetary gear reducers as well as a wide variety of servo and stepper motors. The bearing system for the RB models is comprised of three rows of roller wheels integral to the carriage which are guided by extruded tracks within the housing.

Proven Technology

Proven in numerous applications, the HLE-RB series offers the following advantages:

- Low running friction
- Low particle generation (clean room suitability to class 100)
- Low wear
- Low maintenance
- Quiet operation
- High efficiency
- Long service life
- High dynamic performance due to low-mass, play-free wheels
- Minimal preventative maintenance required
- T-slots integrated on all sides of the profile for mounting attachments or for use as a cable duct
- Timing belts can be replaced without removing load attachment plate
- Multiple configuration options due to T-slots available on both the profile and load plate

Typical Fields of Application

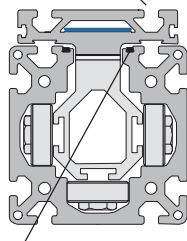
As part of advanced, cost-effective construction of machines and handling systems:

- **Materials handling:** palletization, depalletizing, feeding, part removal
- **Clean room technology:** wafer transport, wafer coating
- **Warehouse technology:** parts picking, storage and retrieval
- **Machine tool automation:** workpiece loading and unloading, tool changing
- **Construction:** formwork, placing reinforcing steel bars in concrete
- **Process engineering:** painting, coating, bonding
- **Testing technology:** guiding ultra-sonic sensors, laboratory equipment
- **Textile machinery:** crosscutting, slitting and stacking, quilting, seam stitching

Optional Features

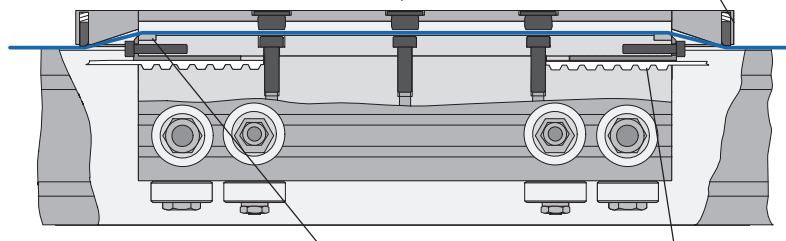
- Direct mounting for planetary gear reducers
- Adjustable “end of travel” limit switches and “home” position sensor
- Clean room preparation option
- Cable carrier systems
- Performance matched Parker servo systems
- Structural components for vertical and multi-axis mounting
- Toe clamps and hardware for fast and easy mounting
- External bumpers
- Link shafts and support bearings for dual axis units
- Splice plates for extending travels beyond length available in a single profile

The T-slots of the load attachment plate and the HLE profile are suitable for T-nuts and T-bolts. (refer to page B79)



Magnetic strips recessed in the profile ensure that the steel strip is fully sealed with the profile.

Plastic caps protect the interior from dust.



Plastic inlays serve as a bearing surface for steel strip.

A spring-loaded felt insert cleans the seal strip.

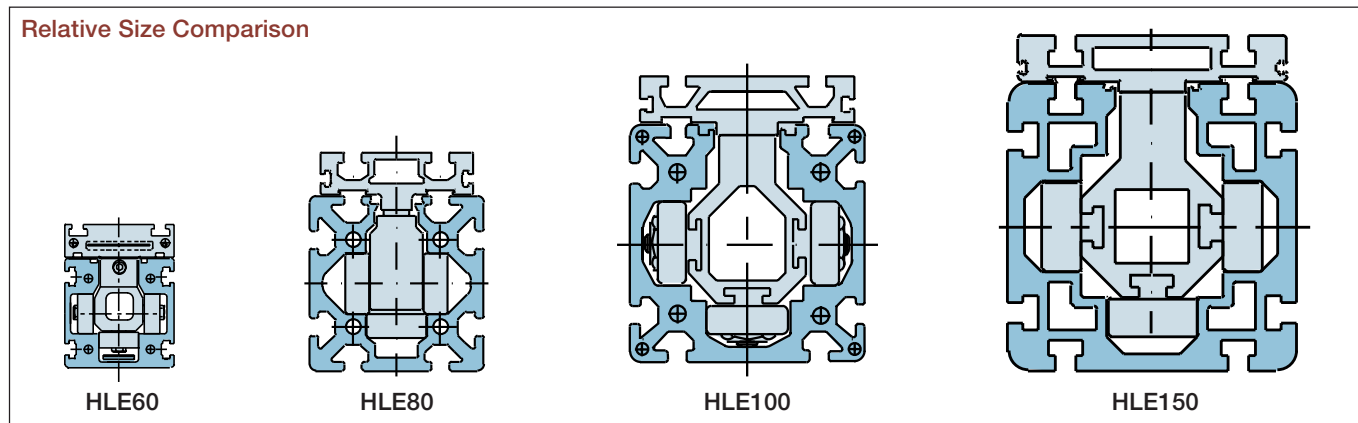
The timing belt is attached to the carriage with a serrated clamp mechanism which assures a strong connection and makes belt replacement easy without the need to remove payload.

HLE-RB Characteristics

Characteristic	Units	HLE60-RB	HLE80-RB	HLE100-RB	HLE150-RB
Unit Weight (Basic unit without stroke)					
Standard Carriage, NL	kg (lb)	2,28 (5.03)	7,9 (17.42)	12,70 (28.00)	31,20 (68.80)
Extended Carriage, VL	kg (lb)	3,98 (8.77)	9,9 (21.83)	15,80 (34.84)	38,50 (84.89)
Carriage Weight					
Standard Carriage, NL	kg (lb)	0,8 (1.76)	1,7 (3.75)	2,80 (6.17)	7,30 (16.10)
Extended Carriage, VL	kg (lb)	1,3 (2.87)	2,8 (6.17)	4,40 (9.70)	11,50 (25.36)
Weight per meter of additional length	kg/m (lb/ft)	3,62 (2.43)	6,4 (14.11)	10,00 (6.70)	21,10 (6.70)
Moment of Inertia (related to the drive shaft)					
Standard Carriage, NL	kg-cm ² (lb-in ²)	3,07 (1.05)	20,3 (6.98)	24,60 (8.41)	123,30 (42.17)
Extended Carriage, VL	kg-cm ² (lb-in ²)	4,81 (1.64)	29,7 (10.22)	36,40 (12.45)	183,60 (62.79)
Travel and Speed					
Maximum Speed ¹	m/s (in/s)	5 (200)	5 (200)	5 (200)	5 (200)
Maximum Acceleration ¹	m/s ² (in/s ²)	10 (393)	10 (393)	10 (393)	10 (393)
Maximum Travel ² – standard carriage, NL	m (in)	3,0 (120)	5,3 (202)	6,2 (244)	9,1 (356)
Maximum Travel ² – extended carriage, VL	m (in)	2,8 (114)	5,1 (201)	6,0 (238)	8,9 (350)
Geometric Data					
Cross section, Square	m (in)	57,1 (2.25)	80,0 (3.2)	100,0 (3.94)	150,0 (5.91)
Moment of Inertia I _x	cm ⁴ (in ⁴)	55,8 (1.34)	152 (3.65)	383,0 (9.20)	1940,0 (46.61)
Moment of Inertia I _y	cm ⁴ (in ⁴)	56,2 (1.35)	177 (4.25)	431,0 (10.35)	2147,0 (51.58)
Modulus of Elasticity	N/mm ² (lb/in ²)	0,72 x 10 ⁵ (0.1044 x 10 ⁶)	0,72 x 10 ⁵ (0.1044 x 10 ⁶)	0,72 x 10 ⁵ (0.1044 x 10 ⁶)	0,72 x 10 ⁵ (0.1044 x 10 ⁶)
Pulley Data, Torques, Forces					
Travel Distance per Revolution	mm/rev (in/rev)	125 (4.92)	190 (7.48)	170 (6.69)	240 (9.45)
Pulley Diameter	mm (in)	39,8 (1.57)	60,5 (2.38)	54,1 (2.13)	76,4 (3.01)
Maximum Drive Torque ³	Nm (lb-in)	8,87 (78.5)	32 (283.0)	40,0 (354.0)	108,0 (955.9)
Maximum Belt Traction (effective load) ³	N (lb)	668 (150)	1058 (238.0)	1478,0 (332.3)	2827,0 (635.5)
Repeatability	mm (in)	±0,1 (±0.004)	±0,1 (±0.004)	±0,1 (±0.004)	±0,1 (±0.004)

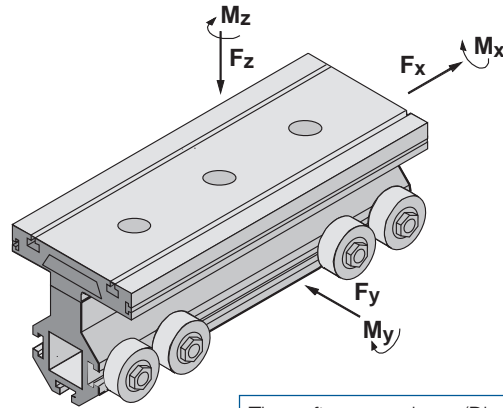
For the following deviations from the above standards, please contact Parker engineering:

- Greater speeds and accelerations may be achieved.
- Splicing possible for longer travel distances. This may cause reductions in effective load, drive torque, speed, acceleration, and repeatability. Consult factory for strip seal availability on spliced units.
- Increased timing belt tension required.



HLE-RB Characteristics

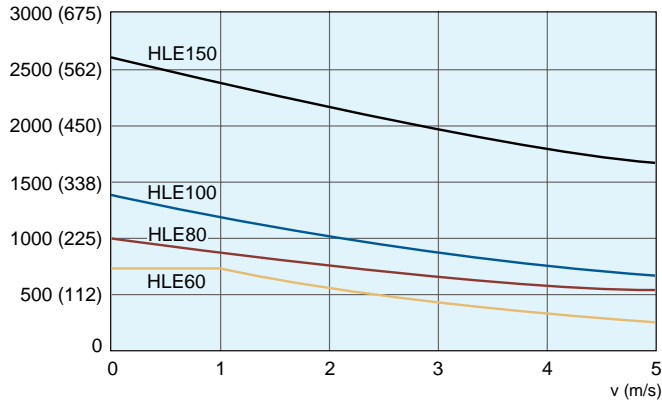
The force and moment ratings of the carriage are speed dependent. The curves shown in the graphs apply to a standard carriage. With the extended carriage, all the values except for F_x (load-bearing capacity of timing belt) can be doubled if the load is applied equally to both halves of the carriage or distributed uniformly along its entire length. The curves show the maximum load-bearing capacity of a carriage in one direction of force or torque. If several loads are applied in different directions, the values given must be derated, or the load or speed should be reduced if necessary.



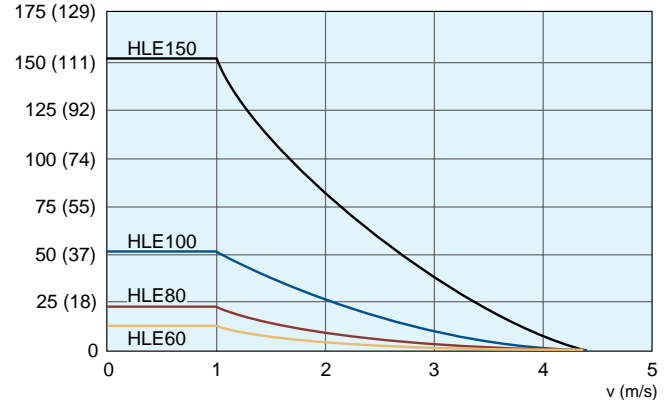
The software package (DimAxes) is available for determination of precise carriage loading. Visit www.daedalpositioning.com to request a Gantry Robot CD.

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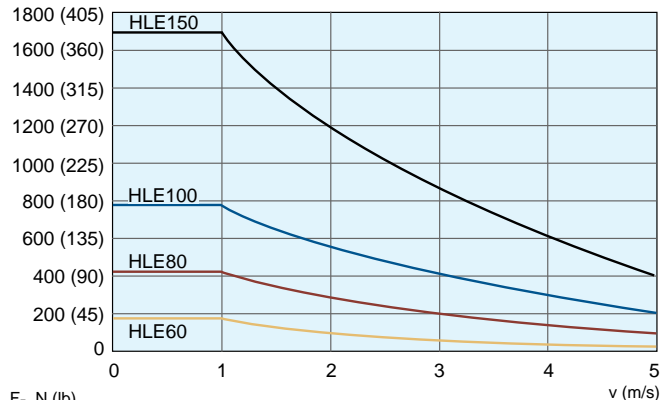
F_x , N (lb) (load-bearing capacity of timing belt)



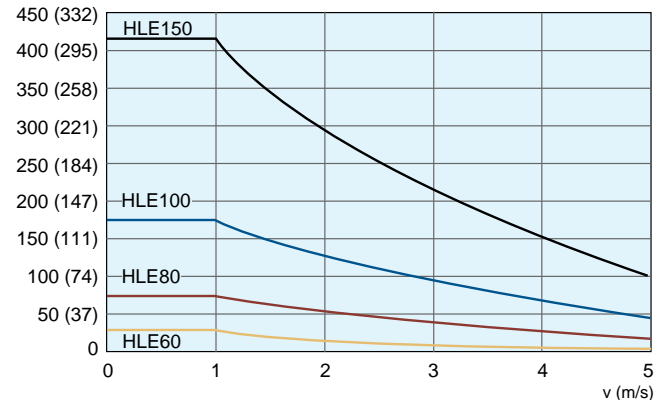
M_x , Nm (ft-lb)



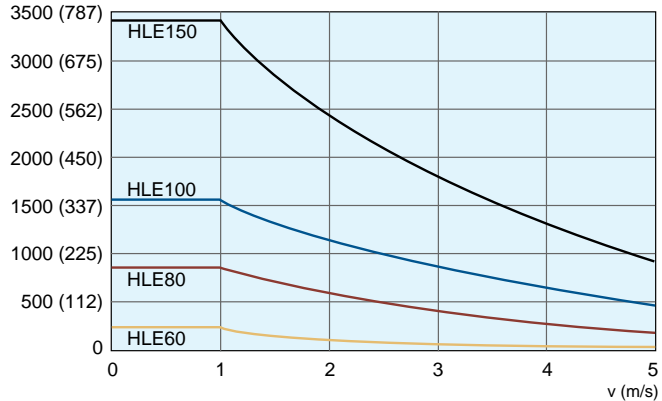
F_y , N (lb)



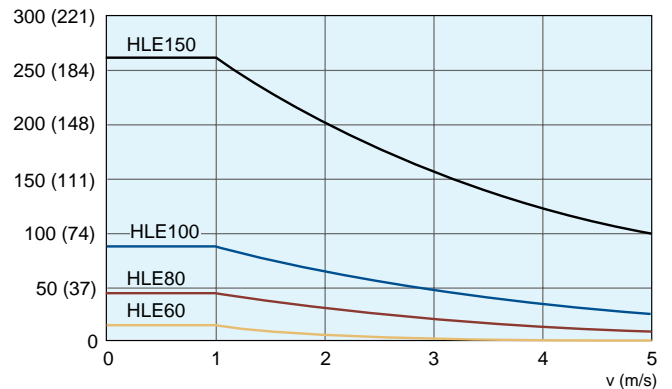
M_y , Nm (ft-lb)



F_z , N (lb)



M_z , Nm (ft-lb)

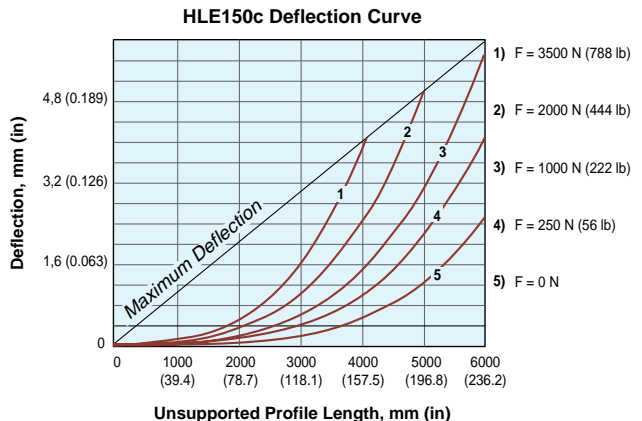
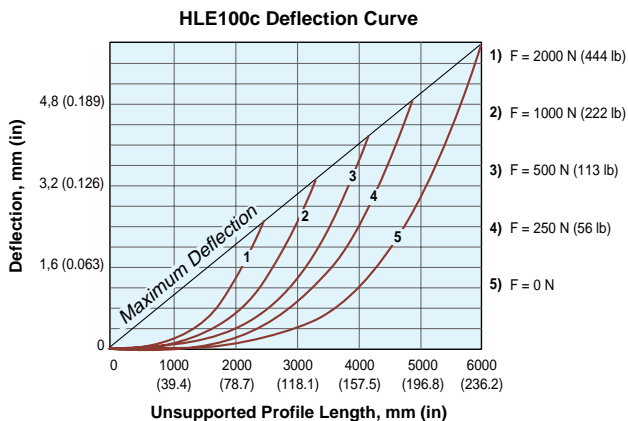
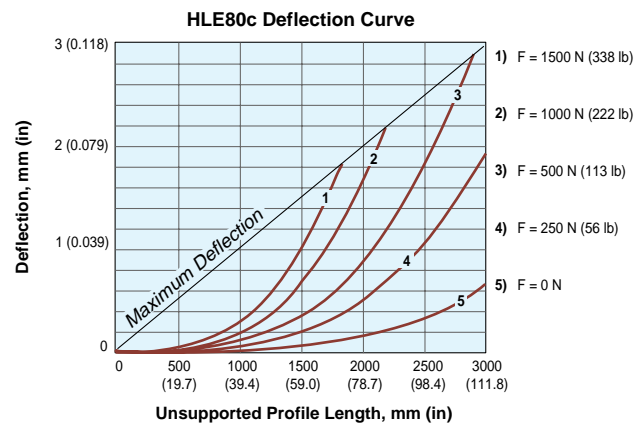
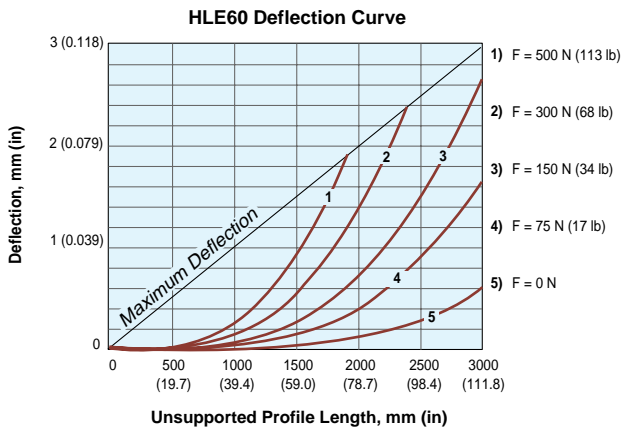
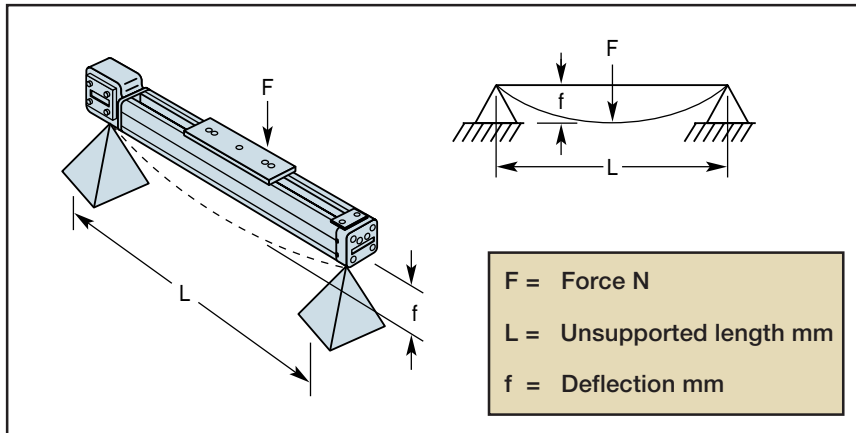


HLE-RB Characteristics

The HLE deflection curves can be used for determining the deflection based on the profile length and the application load weight. Applications requiring high acceleration forces can place a severe strain on the system stability. In these cases, a solid substructure may be required with the HLE product being supported at frequent intervals.

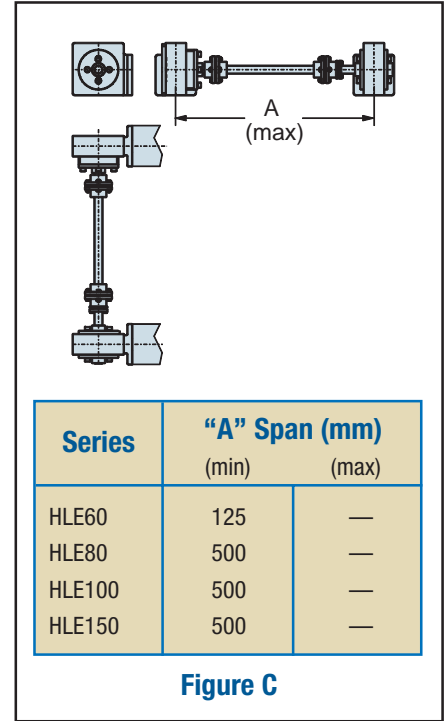
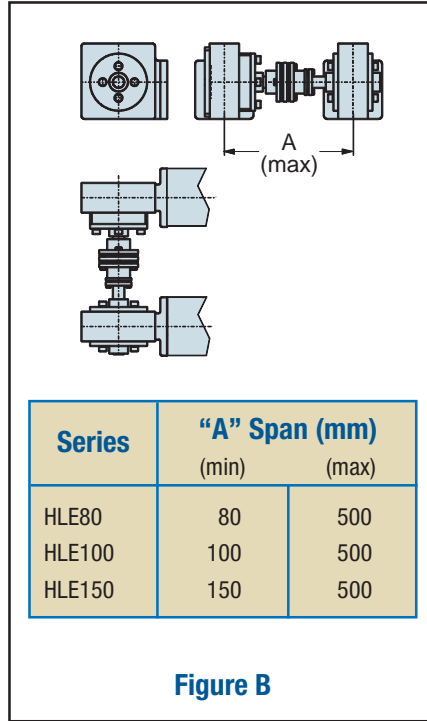
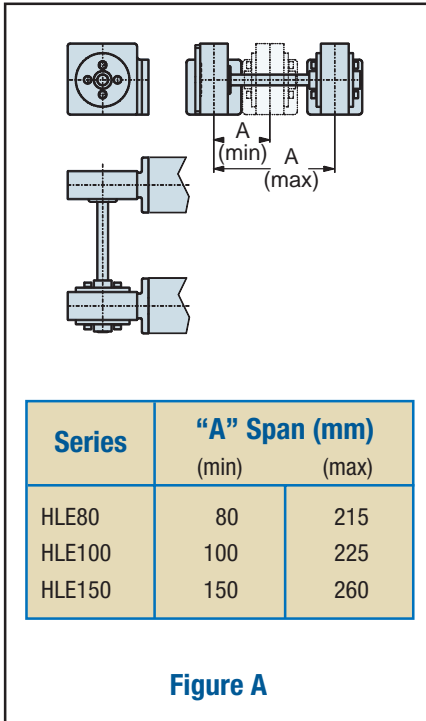
These deflection curves illustrate the deflection f , based on the HLE profile being simply supported at both ends. The graphs take into consideration the self deflection due to the weight of the profile, along with the load to be transported. The maximum deflection cannot be exceeded. If the maximum deflec-

tion is exceeded based on your application parameters, then additional supports are required. Alternatively, the next larger profile size may be considered. For deflection formulas and calculations, please refer to the Technical Information Library found on our web site: www.daedalpositioning.com



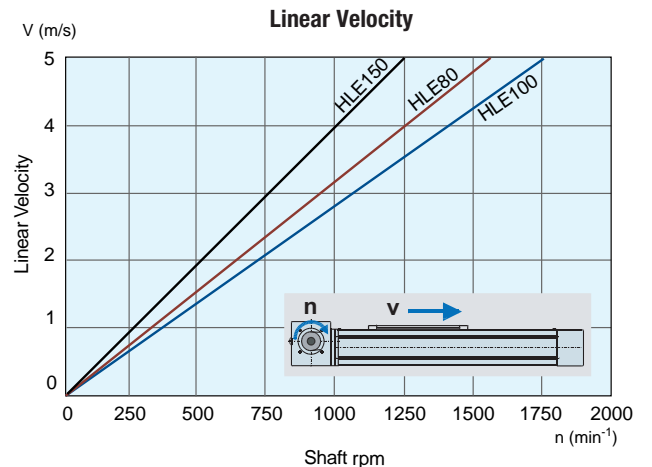
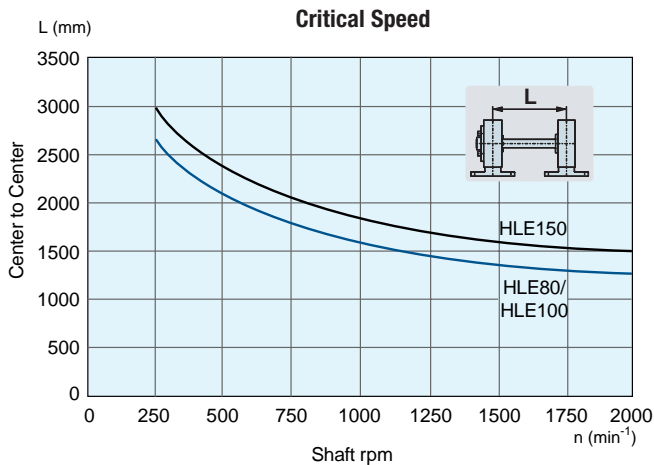
Dual Unit Axis Considerations

When two parallel linear modules are required to form a single axis, the span or distance between each unit determines which type of shaft connection is required. In some cases, a link shaft support bearing might also be required.

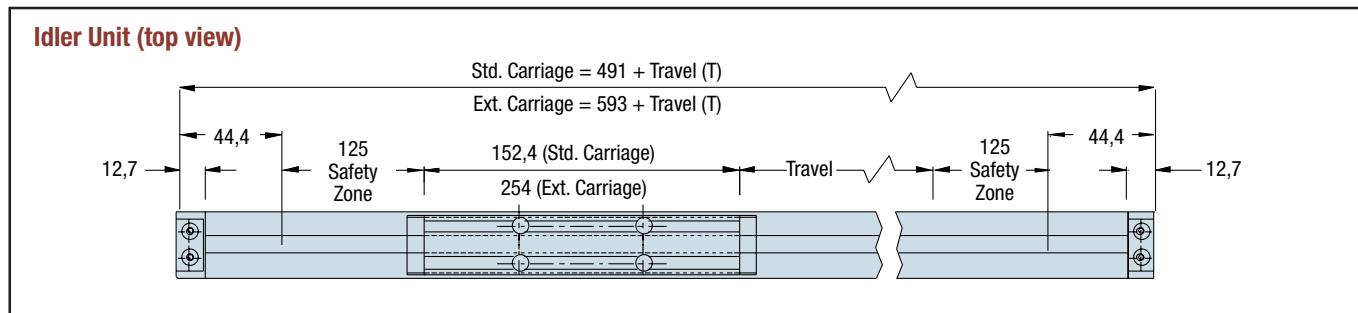
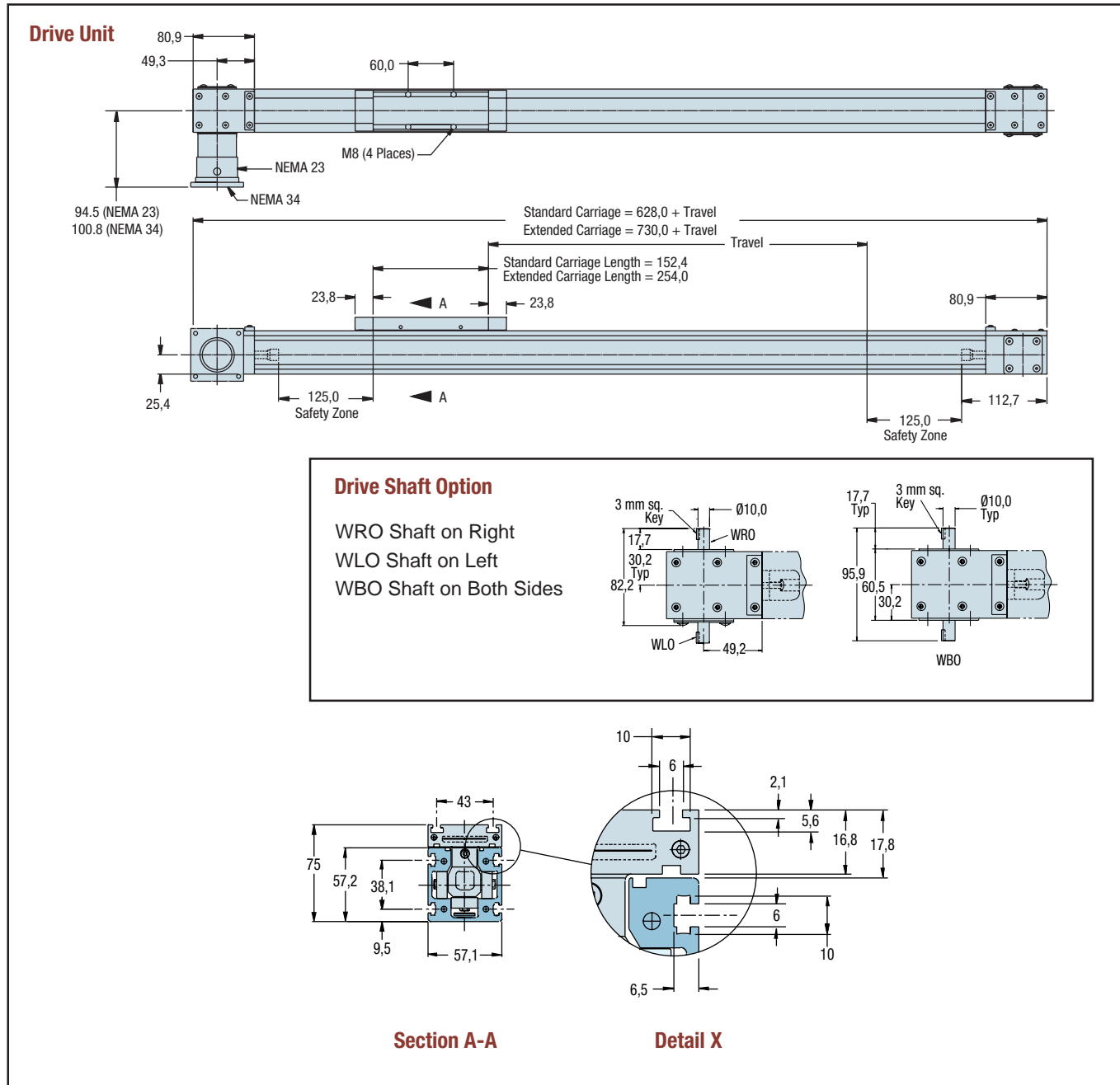


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The link shaft bearing is used to support the linking shaft of an HLE dual axis when there is a large center to center distance. This bearing must be used if the critical speed is exceeded with the dual-axis link shaft.



HLE60-RB Dimensions (mm)



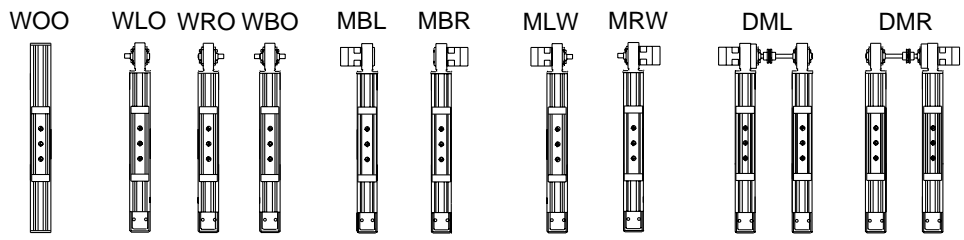
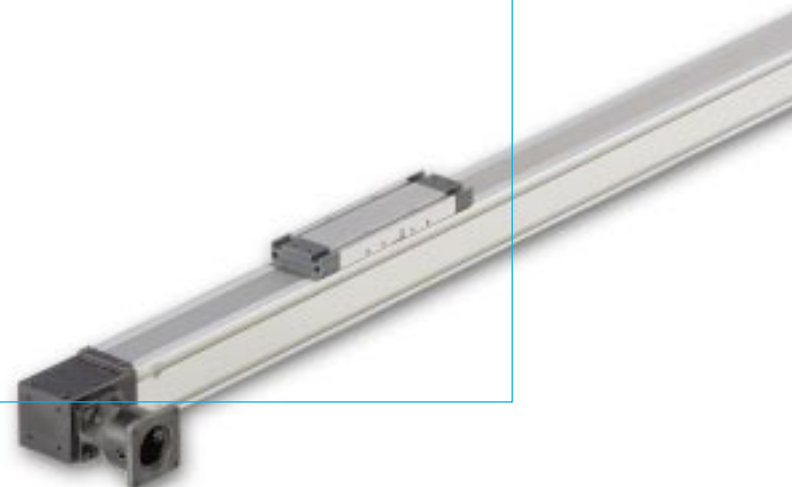
HLE60-RB How to Order

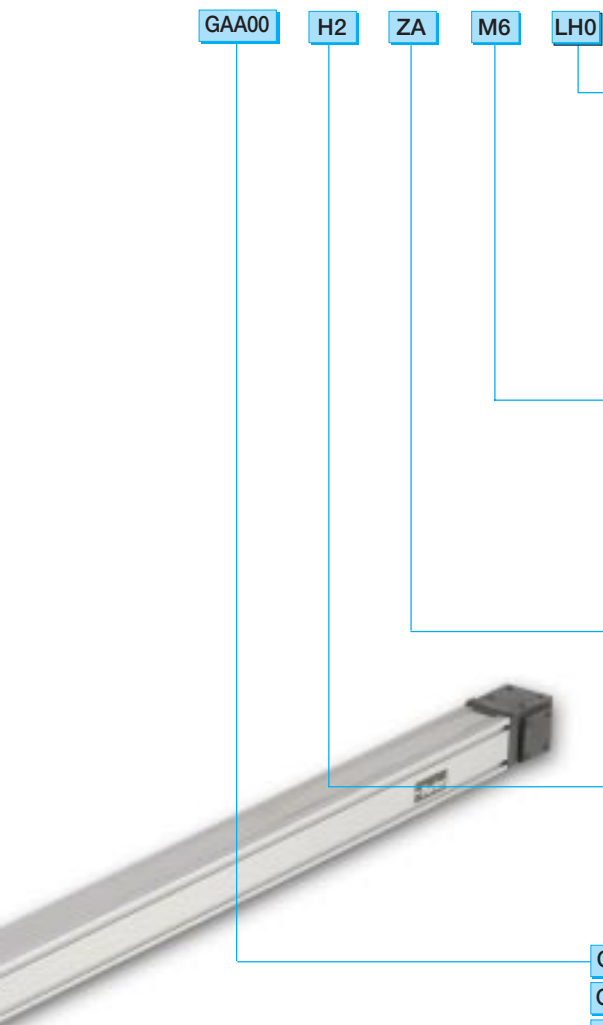
Order Example

HLE060 RB NL E xxxx DA0000 MBL SP5

- Model Series** HLE060
- Bearing Type**
RB
- Carriage Type**
Standard Carriage NL
Extended Carriage
- Unit Type**
Idler M
Single Axis Unit E
Double Axis Unit
- Travel Length**
XXXX xxxx = (mm)
- Drive Shaft Option - Center to Center**
DA0000: No Drive Shaft - Single Axis or Idler Unit DA0000
DAxxxx DAxxxx = (mm)
- Shaft Configuration Options**
No Shaft, Idler Unit WOO
Shaft Left WLO
Shaft Right WRO
Double Shaft WBO
Motor Block Left MBL
Motor Block Right MBR
Motor Block Left, Shaft Right MLW
Motor Block Right, Shaft Left MRW
Double Axis, Motor Block Left DML
Double Axis, Motor Block Right
- Drive Station Interface**
Idler, Requires WOO Option SP0
No Motor Block, Requires WRO, WLO, or WBO SP1
Motor Block - NEMA 23 with .375 in. coupling ... SP2
Motor Block - NEMA 23 with .250 in. coupling ... SP3
Motor Block - NEMA 34 with .375 in. coupling ... SP4
Motor Block - NEMA 34 with .500 in. coupling ... SP5
Motor Block - NEMA 23 without coupling SP8
Motor Block - NEMA 34 without coupling SP9
Motor Block - UTN/PRN-060 with 16 mm coupling SP10
Motor Block - NO70 Motor with 11 mm coupling.. SP11

HLE060
RB
NL
VL
M
E
D
xxxx
DA0000
DAxxxx
WOO
WLO
WRO
WBO
MBL
MBR
MLW
MRW
DML
DMR
SP0
SP1
SP2
SP3
SP4
SP5
SP8
SP9
SP10
SP11





Limit/Home Switch Option

- LH0** No Limit Switch Assembly
- LH3** Three NPN Prox Switches, 5-30 VDC
- LH4** Three PNP Prox Switches, 5-30 VDC

Motor Option*

- M0** No motor
- M1** Customer supplied
- M4** ZETA57-83-MO-S
- M5** ZETA57-102-MO-S
- M6** ZETA83-62-MO-S
- M7** ZETA83-93-MO-S
- M8** ZETA83-135-MO-S
- M12** SM233AE-NGSN
*Zeta stepper motors equipped with 3 meter cable.
Servo motor cables not included (ordered separately).

Steel Strip Option

- ZA** Unit with Steel Strip (IP30)
- ZB** Unit without Steel Strip

Mounting Orientation

- H1** Carriage Up
- H2** Carriage Down
- H3** Carriage on Side, Drive Station Up
- H4** Carriage on Side, Drive Station Down

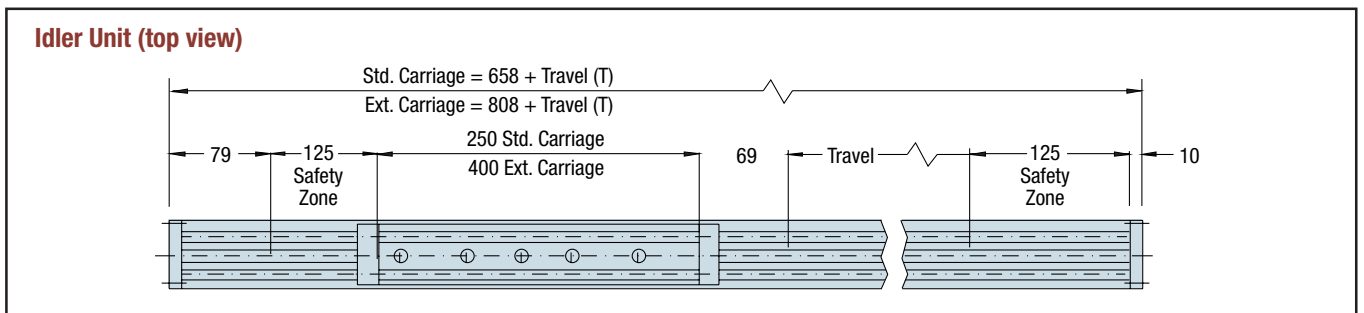
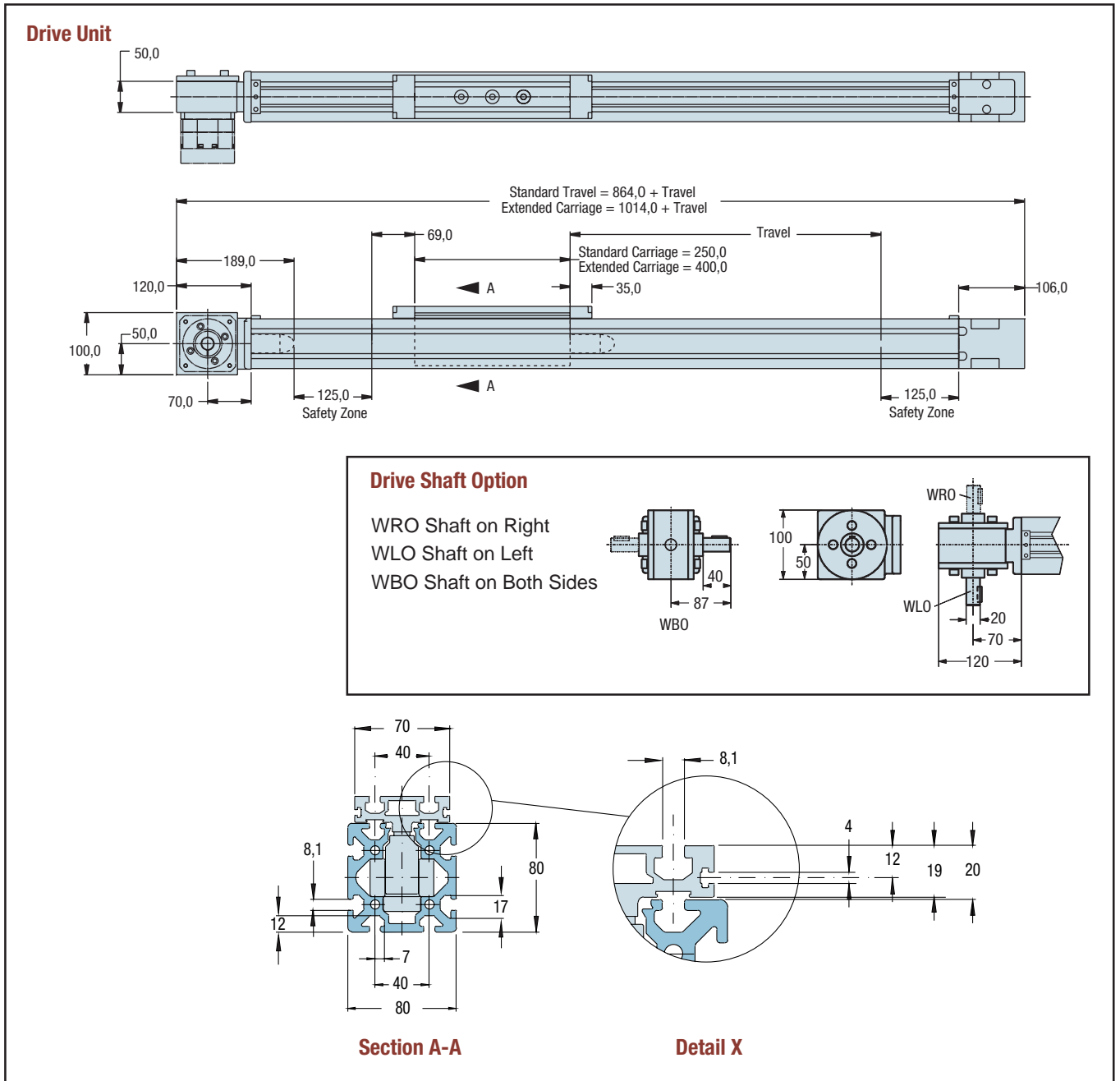
Gearbox Reducer with Motor Mounting Flange*

- GAA00** No Reducer
- GABnn** Customer Supplied Reducer
- GZACnn** UTN-060 (SM23)
- GZADnn** UTN-060 (NEMA 23)
- GZAWnn** UTN-060 (NEMA 34)
- GZSAnn** PRN-060 (Universal Flange)
- GZSBnn** UTN-060 (Universal Flange)

*In-line single stage ratios: 3:1, 5:1, 8:1, 10:1
In-line dual stage ratios: 15:1, 25:1

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HLE80-RB Dimensions (mm)



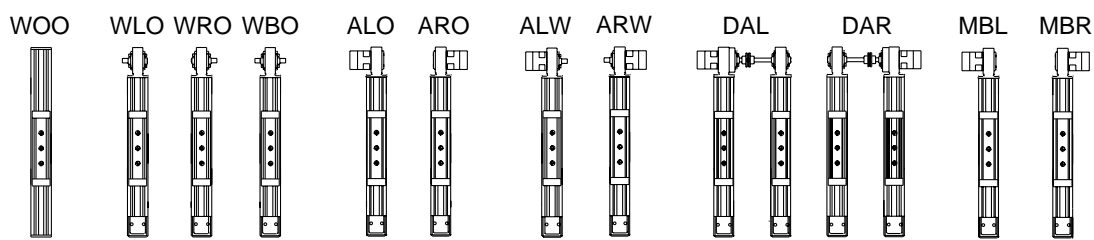
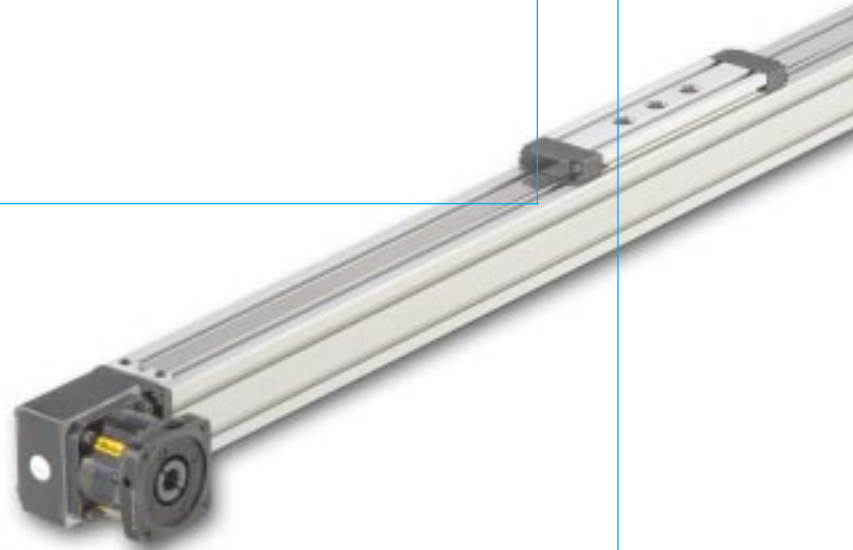
HLE80-RB How to Order

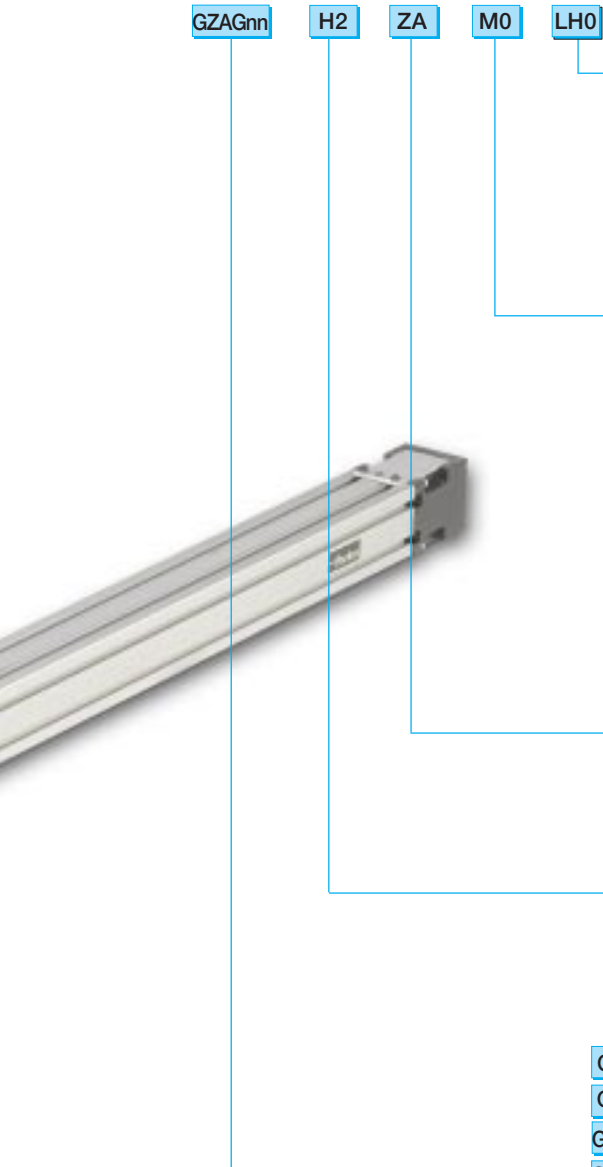
Order Example

HLE080 RB NL E xxxx DA0000 ALO SP1

- Model Series** HLE080
- Bearing Type**
RB
- Carriage Type**
Standard Carriage NL
Extended Carriage
- Unit Type**
Idler M
Single Axis Unit E
Double Axis Unit
- Travel Length**
XXXX
- Drive Shaft Option - Center to Center**
DA0000: No Drive Shaft - Single Axis or Idler Unit
DAxxxx
- Shaft Configuration Options**
No Shaft, Idler Unit WOO
Shaft Left WLO
Shaft Right WRO
Double Shaft WBO
Reducer Left ALO
Reducer Right ARO
Reducer Left, Shaft Right ALW
Reducer Right, Shaft Left ARW
Double Axis, Drive Left DAL
Double Axis, Drive Right DAR
Motor Block Left MBL
Motor Block Right
- Drive Station Interface**
Idler or Shaft Option SP0
Drive Housing for UTN/PRN-092 Gear Reducer ..
Motor Block - NEMA 34 with .500 in. coupling ...
Motor Block - NEMA 34 with .375 in. coupling ...
Motor Block - NEMA 34 without coupling
Motor Block - with coupling for JO923 direct drive .
Motor Block - NEMA 42 with .625 in. coupling ...
Motor Block - NEMA 42 without coupling

HLE080
RB
NL
VL
M
E
D
xxxx
xxxx = (mm)
DA0000
DAxxxx
xxxx = (mm)
WOO
WLO
WRO
WBO
ALO
ARO
ALW
ARW
DAL
DAR
MBL
MBR





Limit/Home Switch Option

- LH0** No Limit Switch Assembly
- LH1** Three Mechanical Switches, 1 NO and 1 NC contact per switch
- LH2** Two Mechanical Switches, 1 NPN Prox Switch
- LH3** Three NPN Prox Switches, 5-30 VDC
- LH4** Three PNP Prox Switches, 5-30 VDC

Motor Option*

- | | |
|-----------------------------|-------------------------|
| M0 No Motor | M40 N0342FR-NMSN |
| M1 Customer Supplied | M41 N0702FE-NTQN |
| M6 ZETA83-62-MO-S | M42 N0342FE-NTQN |
| M7 ZETA83-93-MO-S | M43 J0921GR-NMSN |
| M8 ZETA83-135-MO-S | M44 J0922JR-NMSN |
| M26 HDY92E4-44S | M45 J0923KR-NMSN |
| M36 RE42CSKC10 | M46 J0921GE-NMSN |
| M38 HDY70C4-44S | M47 J0922JE-NMSN |
| M39 N0704FR-NMSN | M48 J0923KE-NMSN |
- *Zeta stepper motors equipped with 3 meter cable. Servo motor cables not included (ordered separately).

Steel Strip Option

- ZA** Unit with Steel Strip (IP30)
- ZB** Unit without Steel Strip

Mounting Orientation

- H1** Carriage Up
- H2** Carriage Down
- H3** Carriage on Side, Drive Station Up
- H4** Carriage on Side, Drive Station Down

Gearbox Reducer with Motor Mounting Flange*

- GAA00** No Reducer
- GABnn** Customer Supplied Reducer
- GZAEnn** UTN-092 (NEMA 34S/ZETA 83 Series)
- GZAGnn** PRN-092 (NEMA 42/RE42C)
- GZAHnn** PRN-092 (NEMA 34/ZETA 83 Series)
- GZAJnn** PRN-092 (HDY92/NO92/JO92)
- GAKnn** WPL90 (HDY92/NO92/JO92)
- GZAYnn** UTN-092 (JO921/JO922)
- GZBAnn** PRN-092 (NO70/HDY70)
- GZBBnn** PRN-092 (NO34)
- GZSCnn** PRN-092 (Universal Flange)
- GSDnn** WPL90 (Universal Flange)
- GZSEnn** UTN-092 (Universal Flange)

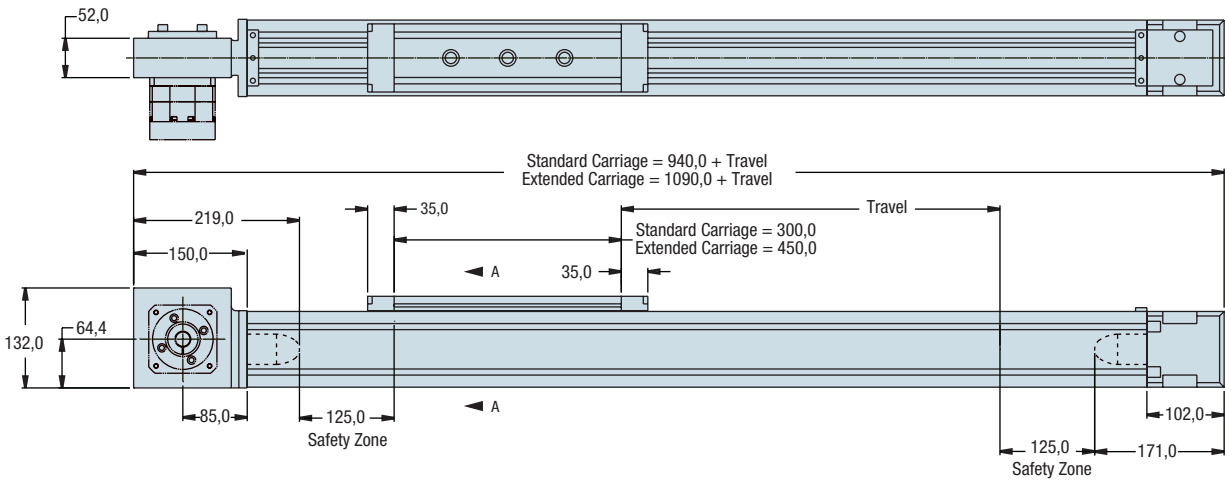
*In-line single stage ratios: 3:1, 5:1, 8:1, 10:1
In-line dual stage ratios: 15:1, 25:1
Right angle ratios: 5:1, 8:1, 10:1
Right angle gear reducers mounted parallel to actuator.

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HLE100-RB Dimensions (mm)

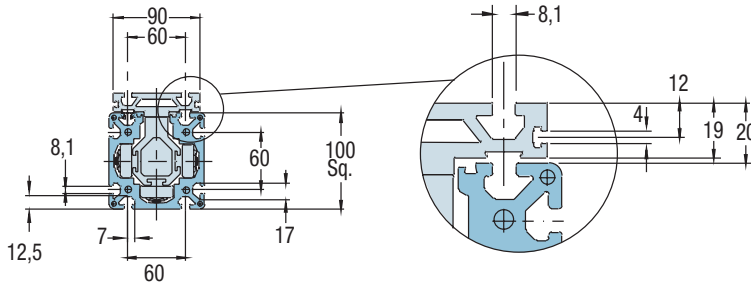
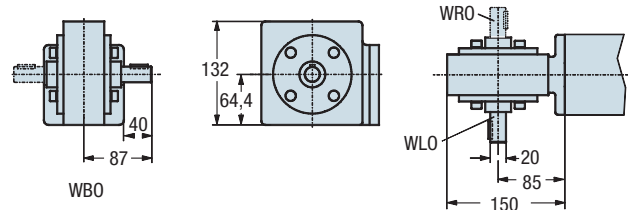


Drive Unit



Drive Shaft Option

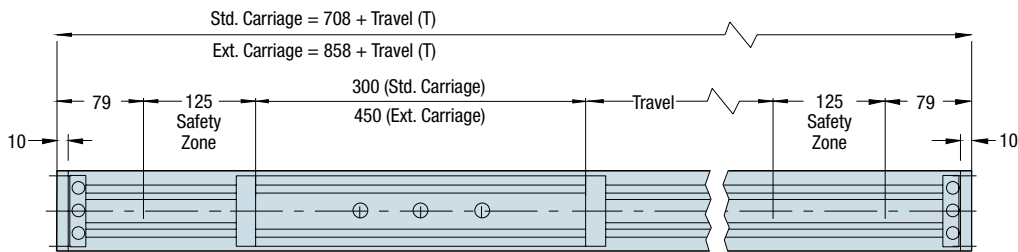
- WRO Shaft on Right
- WLO Shaft on Left
- WBO Shaft on Both Sides



Section A-A

Detail X

Idler Unit (top view)

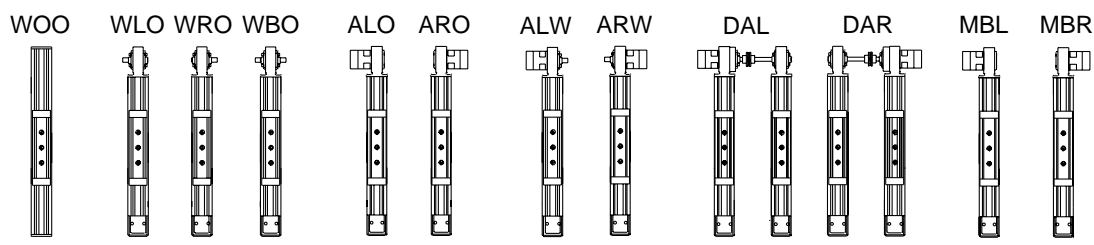
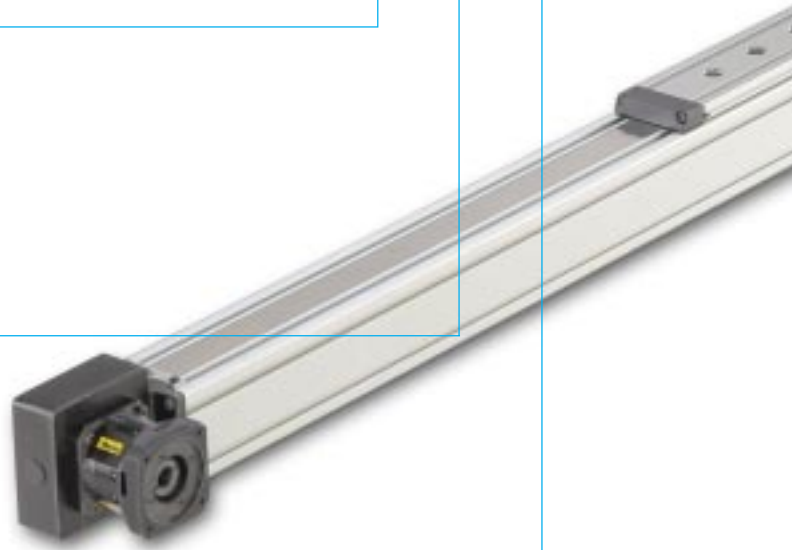
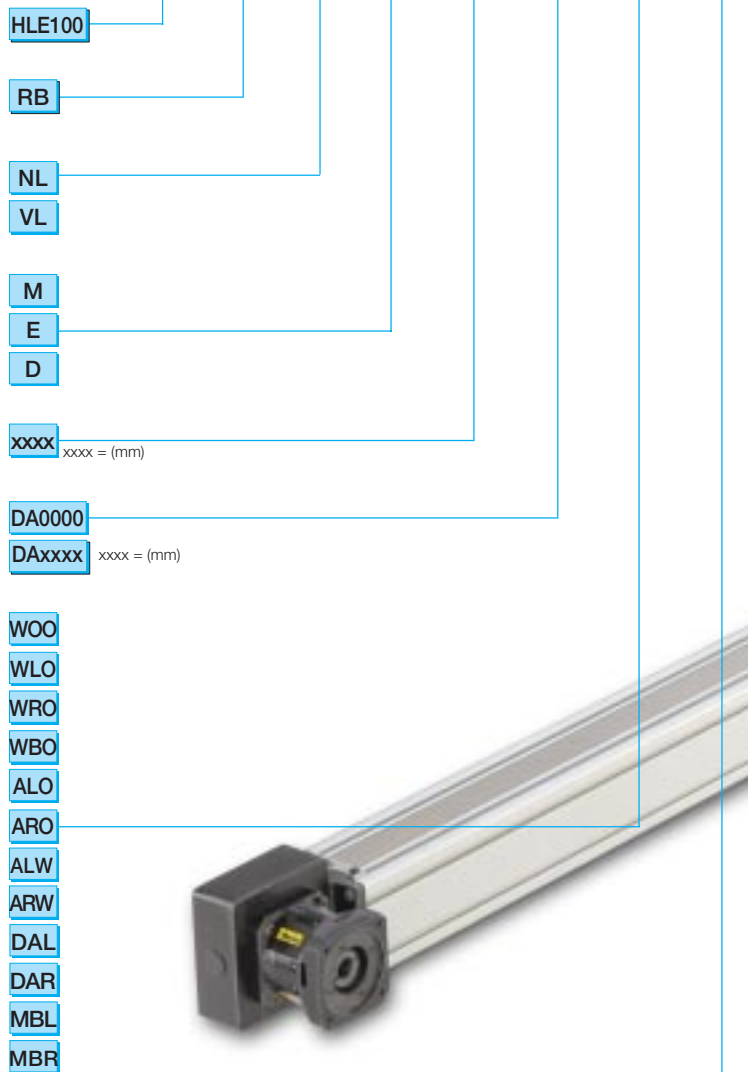


HLE100-RB How to Order

Order Example

HLE100 RB NL E xxxx DA0000 ARO SP2

- Model Series** HLE100
- Bearing Type**
RB
- Carriage Type**
Standard Carriage NL
Extended Carriage VL
- Unit Type**
Idler M
Single Axis Unit E
Double Axis Unit D
- Travel Length**
XXXX xxxx = (mm)
- Drive Shaft Option - Center to Center**
DA0000: No Drive Shaft - Single Axis or Idler Unit DA0000
DAxxxx DAxxxx = (mm)
- Shaft Configuration Options**
No Shaft, Idler Unit WOO
Shaft Left WLO
Shaft Right WRO
Double Shaft WBO
Reducer Left ALO
Reducer Right ARO
Reducer Left, Shaft Right ALW
Reducer Right, Shaft Left ARW
Double Axis, Drive Left DAL
Double Axis, Drive Right DAR
Motor Block Left MBL
Motor Block Right MBR
- Drive Station Interface**
Idler or Shaft Option SP0
Drive Housing for UTN/PRN-092 Gear Reducer .. SP1
Drive Housing for 115 mm Gear Reducer, Daedal Option SP2 (Check Dimensions for Compatibility)
Motor Block - NEMA 34 with .500 in. coupling ... SP3
Motor Block - NEMA 34 with .375 in. coupling ... SP4
Motor Block - NEMA 34 without coupling SP5
Motor Block - with coupling for JO923 direct drive . SP6
Motor Block - NEMA 42 with .625 in. coupling ... SP7
Motor Block - NEMA 42 without coupling SP8





GZAMnn

H2

ZB

M28

LH0

Limit/Home Switch Option

- LH0** No Limit Switch Assembly
- LH1** Three Mechanical Switches, 1 NO and 1 NC contact per switch
- LH2** Two Mechanical Switches, 1 NPN Prox Switch
- LH3** Three NPN Prox Switches, 5-30 VDC
- LH4** Three PNP Prox Switches, 5-30 VDC

Motor Option*

- M0** No Motor
- M1** Customer Supplied
- M6** ZETA83-62-MO-S
- M7** ZETA83-93-MO-S
- M8** ZETA83-135-MO-S
- M26** HDY92E4-44S
- M28** HDY115A6-88S
- M29** HDY115C6-88S
- M36** RE42CSKC10
- M38** HDY70C4-44S
- M39** NO704FR-NMSN
- M40** N0342FR-NMSN
- M41** N0702FE-NTQN
- M42** N0342FE-NTQN
- M43** JO921GR-NMSN
- M44** JO922JR-NMSN
- M45** JO923KR-NMSN
- M46** JO921GE-NMSN
- M47** JO922JE-NMSN
- M48** JO923KE-NMSN

*Zeta stepper motors equipped with 3 meter cable.
Servo motor cables not included (ordered separately).

Steel Strip Option

- ZA** Unit with Steel Strip (IP30)
- ZB** Unit without Steel Strip

Mounting Orientation

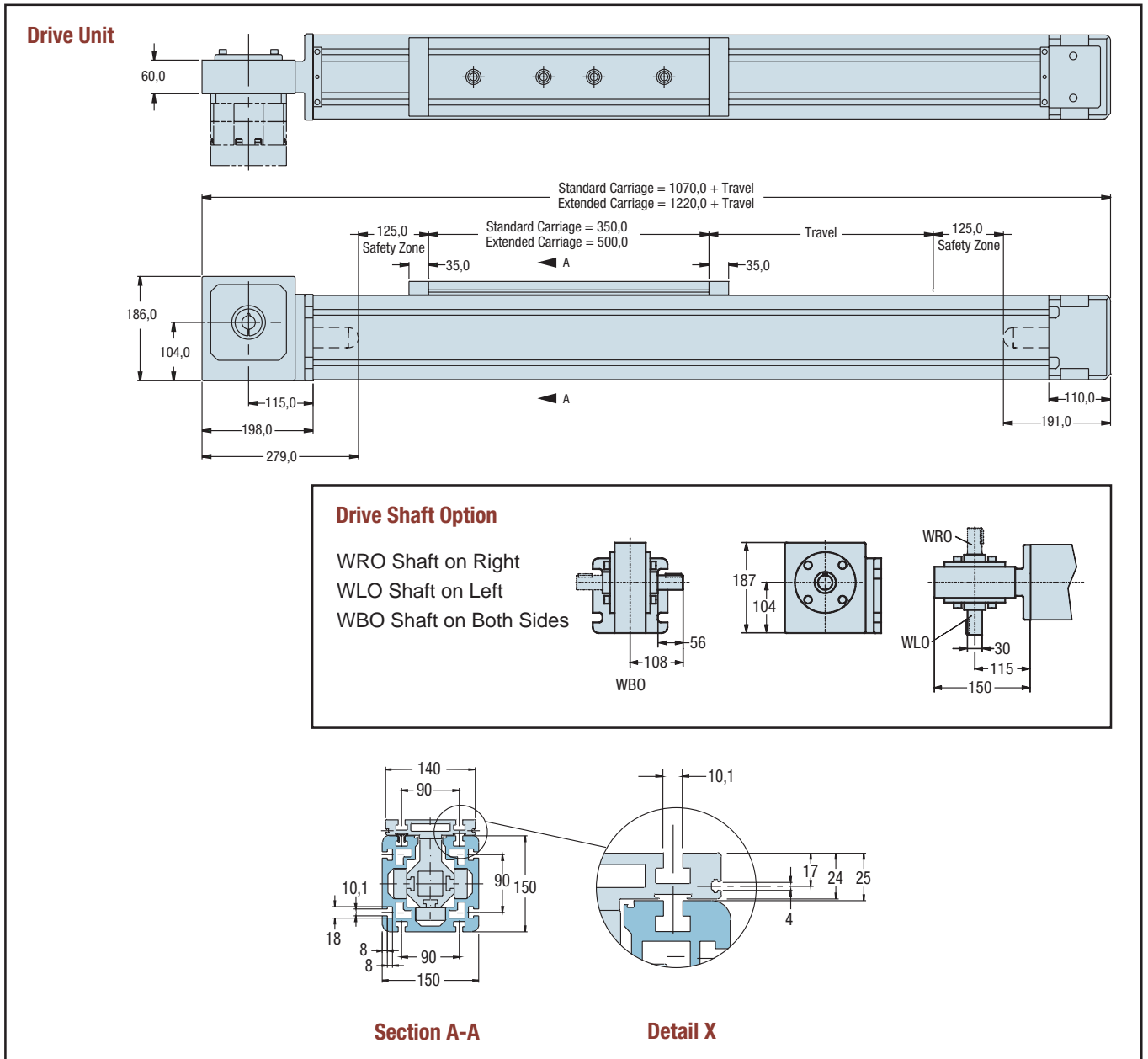
- H1** Carriage Up
- H2** Carriage Down
- H3** Carriage on Side, Drive Station Up
- H4** Carriage on Side, Drive Station Down

Gearbox Reducer with Motor Mounting Flange*

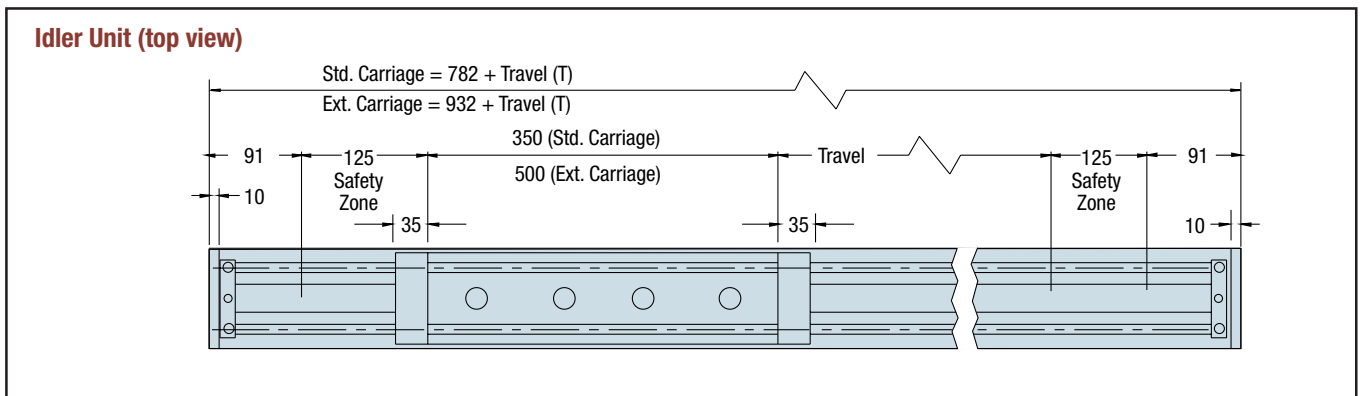
- GAA00** No Reducer
- GABnn** Customer Supplied Reducer
- GZAEnn** UTN-092 (NEMA 34S/ZETA 83 Series)
- GZAGnn** PRN-092 (NEMA 42/RE42C)
- GZAHnn** PRN-092 (NEMA 34/ZETA 83 Series)
- GZAJnn** PRN-092 (HDY92/NO92/JO92)
- GAKnn** WPL90 (HDY92/NO92/JO92)
- GZAYnn** UTN-092 (JO921/JO922)
- GZBAnn** PRN-092 (NO70/HDY70)
- GZBBnn** PRN-092 (NO34)
- GZSCnn** PRN-092 (Universal Flange)
- GSDnn** WPL90 (Universal Flange)
- GZSEnn** UTN-092 (Universal Flange)
- GZAMnn** PRN-115, Daedal Option (HDY115)
- GAPnn** WPL115 (HDY115)
- GZBCnn** PRN-115, Daedal Option (RS43C)
- GZSFnn** PRN-115, Daedal Option (Universal Flange)
- GSGnn** WPL115 (Universal Flange)
- GZSJnn** UTN-115, Daedal Option (Universal Flange)

*In-line single stage ratios: 3:1, 5:1, 8:1, 10:1
In-line dual stage ratios: 15:1, 25:1
Right angle ratios: 5:1, 8:1, 10:1
Right angle gear reducers mounted parallel to actuator.

HLE150-RB Dimensions (mm)



High Speed Automation

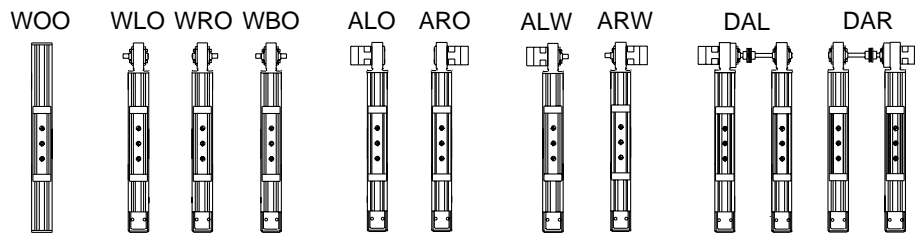


HLE150-RB How to Order

Order Example

HLE150 RB NL E xxxx DA0000 ARO SP1

- Model Series** HLE150
- Bearing Type**
RB RB
- Carriage Type**
Standard Carriage NL
Extended Carriage VL
- Unit Type**
Idler M
Single Axis Unit E
Double Axis Unit D
- Travel Length**
XXXX xxxx = (mm)
- Drive Shaft Option - Center to Center**
DA0000: No Drive Shaft - Single Axis or Idler Unit
DAxxxx DAxxxx = (mm)
- Shaft Configuration Options**
No Shaft, Idler Unit WOO
Shaft Left WLO
Shaft Right WRO
Double Shaft WBO
Reducer Left ALO
Reducer Right ARO
Reducer Left, Shaft Right ALW
Reducer Right, Shaft Left ARW
Double Axis, Drive Left DAL
Double Axis, Drive Right DAR
- Drive Station Interface**
Idler or Shaft Option SP0
Drive Housing for 115 mm Gear Reducer, Daedal Option SP1 (Check Dimensions for Compatibility)
Drive Housing for 142 mm Gear Reducer SP2 (Check Dimensions for Compatibility)





GZAX05

H2

ZA

M33

LH2

LH0

LH1

LH2

LH3

LH4

M0

M1

M28

M29

M32

M33

M37

ZA

ZB

H1

H2

H3

H4

GAA00

GABnn

GAPnn

GZAXnn

GZAZnn

GZBCnn

GZSFnn

GSGnn

GZSHnn

GZSInn

GZSJnn

Limit/Home Switch Option

- LH0 No Limit Switch Assembly
- LH1 Three Mechanical Switches, 1 NO and 1 NC contact per switch
- LH2 Two Mechanical Switches, 1 NPN Prox Switch
- LH3 Three NPN Prox Switches, 5-30 VDC
- LH4 Three PNP Prox Switches, 5-30 VDC

Motor Option*

- M0 No Motor
 - M1 Customer Supplied
 - M28 HDY115A6-88S
 - M29 HDY115C6-88S
 - M32 HDY142C6-88S
 - M33 HDY142G6-88S
 - M37 RS43CSKC10
- *Zeta stepper motors equipped with 3 meter cable.
Servo motor cables not included (ordered separately).

Steel Strip Option

- ZA Unit with Steel Strip (IP20)
- ZB Unit without Steel Strip

Mounting Orientation

- H1 Carriage Up
- H2 Carriage Down
- H3 Carriage on Side, Drive Station Up
- H4 Carriage on Side, Drive Station Down

Gearbox Reducer with Motor Mounting Flange

- GAA00 No Reducer
- GABnn Customer Supplied Reducer
- GAPnn WPL115 (HDY115)
- GZAXnn PRN-115, Daedal Option (HDY142C6)
- GZAZnn PRN-142 (HDY142G6)
- GZBCnn PRN-115, Daedal Option (RS43C)
- GZSFnn PRN-115, Daedal Option (Universal Flange)
- GSGnn WPL115 (Universal Flange)
- GZSHnn PRN-142 (Universal Flange)
- GZSInn UTN-142 (Universal Flange)
- GZSJnn UTN-115, Daedal Option (Universal Flange)

*In-line single stage ratios: 3:1, 5:1, 8:1, 10:1
In-line dual stage ratios: 15:1, 25:1
Right angle ratios: 5:1, 8:1, 10:1
Right angle gear reducers mounted parallel to actuator.