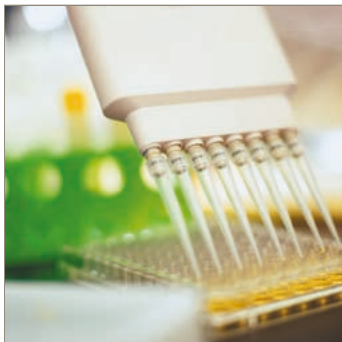
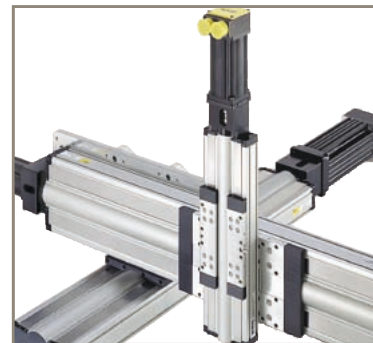


aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

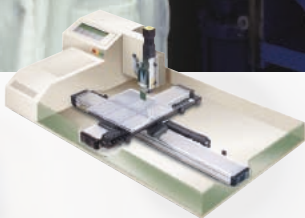
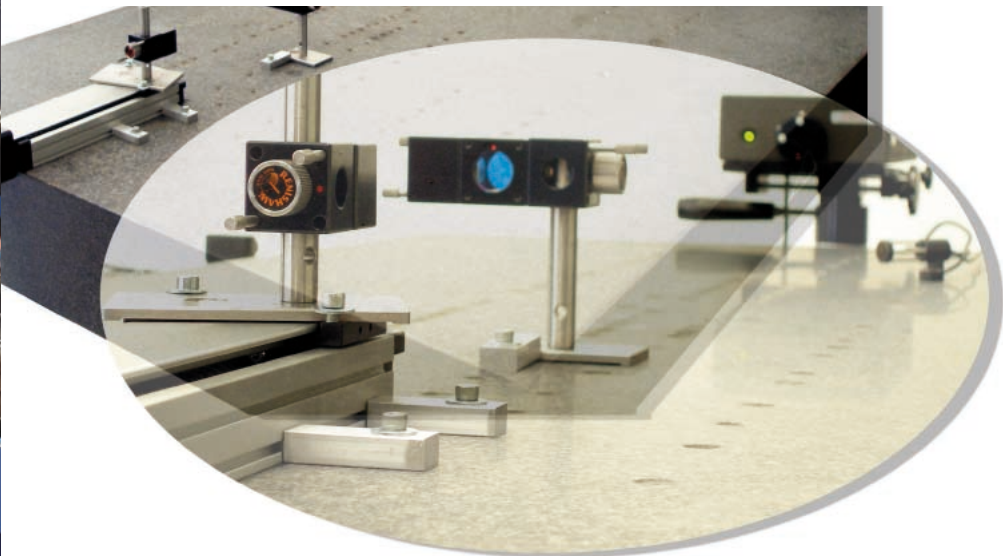


Precision Technology

HD Series Screw Driven Linear Positioners

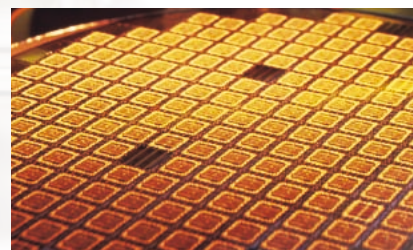
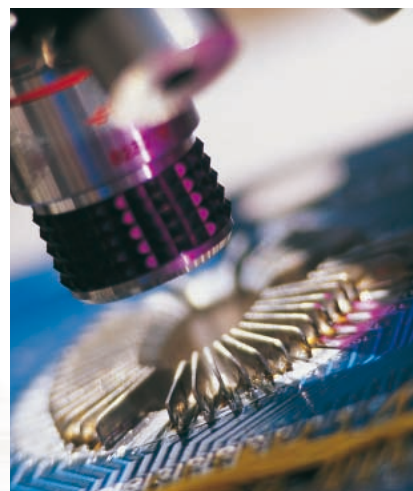
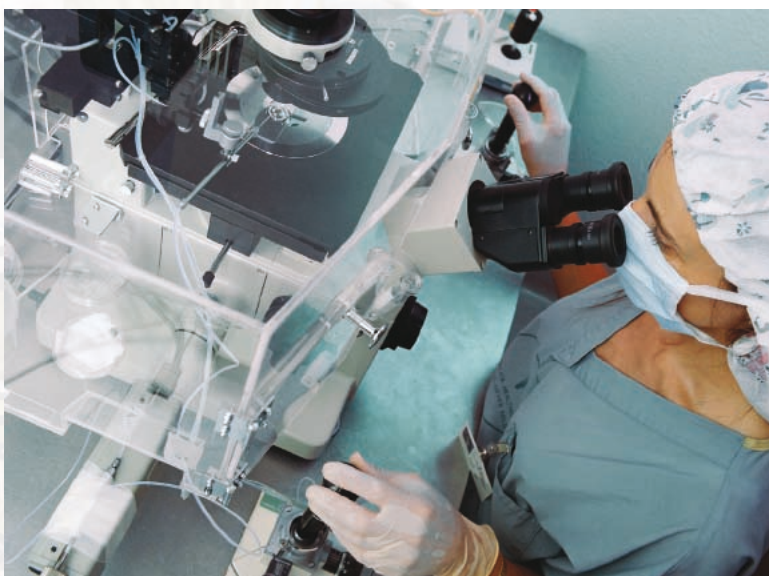


ENGINEERING YOUR SUCCESS.



Parker Facility in Offenburg, Germany

Manufacturing and Service for Precision Components in Europe



Precision Automation

Applications and industries integrating precision motion control have requirements that exceed most motion product capabilities - levels of accuracy, repeatability, straightness, flatness and orthogonality that demand specialized product designs and manufacturing capabilities. With more than 25 years of product design and manufacturing experience in the most demanding precision motion markets, Parker is ready to provide the products and systems to serve our customers' most challenging needs.

Customization and Services

Unlike many other motion technologies, precision electromechanical applications often require custom solutions. Many solutions are complete one-of-a kind systems.

Our experienced engineers and technicians provide:

- Application advice
- Product sizing and selection, including mechanics, motors, drives and controls
- System design
- System manufacturing including testing and axis alignment
- System commissioning
- System maintenance

Parker Precision Automation customers can receive many optional services such as:

- 3D Custom assembly drawings
- Matches motor control systems
- Life-load diagrams
- Customized cabling systems

Advanced Manufacturing Capabilities

Our advanced manufacturing and assembly process allows us to build quality and consistency into every element of your motion system. Each mechanical system is fully assembled prior to shipment and each component is properly handled to protect finish and appearance. While providing advanced manufacturing capabilities, we also strive to maintain the industry's best lead times for precision motion products.

Performance and specifications are verified with state-of-the-art testing, including

- **Cleanroom-approved versions** - Parker is equipped with in house particulate testing facilities to certify materials for cleanroom ratings.
- **EMI testing** - Parker has an EMI test chamber, which allows us to test equipment to verify levels of electromagnetic interference.
- **Precision Metrology Lab** - When precision is critical to your process, you need validated, proven performance data. Parker certifies all precision-grade positioners using state-of-the-art laser interferometers, and provides reports to validate accuracy and bidirectional repeatability.

Parker Automation Technology Centers

Parker Automation Technology Centers are a network of premier product and service providers who can serve you locally for your automation needs. Each Automation Technology Center is certified to have completed significant product training and has the ability to provide subsystem solutions with local support. Parker Automation Technology Centers are located throughout Europe, and are served by our European manufacturing facility in Offenburg, Germany.

Selectable Levels of Integration

Parker's **Selectable Levels of Integration** is a philosophy of product development and management that allows the machine builder to select an appropriate system, subsystem, or component to meet a specific need. Parker has solutions for machine builders of all types, from those who want a complete integrated system to those who want to build their own system from "best of breed" components.

Systems

Machine builders and OEMs often choose to integrate a complete electromechanical system into their machine. They have confidence in knowing that our knowledge, experience, and support will ensure that their goals are met. Minimal design engineering ensures component compatibility from a single source.

Subsystems and Bundled Products

For a cost-effective and efficient solution, Parker offers bundled or kitted systems. We can combine motors, gearheads, and positioning systems to deliver a configured subsystem ready for installation. Parker configuration and setup software accommodates the rest of the product line, making start-up a snap. Combining this with our custom product modification capabilities gives the machine builder an economical custom-fit solution, with reduced engineering effort, straightforward integration, and modular compatibility.

Component Products

We offer the broadest range of linear and rotary motion products available for automation systems. If you have the capability and experience to develop your own systems, our innovative, easy-to-use products will help you get the job done. Parker provides short lead times, large selection, and proven reliability.

HD Series

www.parker-eme.com/HD

HD Series Features

HD series linear positioners

- Pre-engineered package
- Performance matched components
- Environmental protection
- Robust design – exceptional beam strength



The HD series linear table line is a robust, positioning table (in the precision range) that is easy to apply, easy to install, and easy to maintain. The robust design begins with a deep channel extruded body and carriage that provide exceptional beam strength and carriage stiffness.

The linear bearings and ballscrew are precision components selected for their long life at 100 % duty operation. The HD series also includes IP30 rated belt seals that protect the interior components from debris. The HD series is very easy to apply. As part of the configurable part

number, users can select options such as screw lead, home and limit sensors, a fail safe brake, and motor orientation.

High efficiency ballscrew drive

is precision ground or precision rolled and offered in 5, 10, 20, and 40 mm leads. Like the linear bearings the screw is self lubricating and is maintenance free for the life of the table.

IP30 rated strip seals

protect the table's internal components from falling debris as well as enhance the overall appearance.

High-performance brushless servo motor

is performance-matched and included with the table in both in-line and parallel configurations. System level performance data is provided to minimize motor sizing requirements.

Home/limit sensors

Hall effect sensors establish „end of travel“ and „home“ locations and are easily adjustable over the entire travel length (not shown).

Dowel holes

are provided in the base and carriage for repeatable mounting payloads and the table.

T-slot mounting

is available along the entire body length for convenient attachment of accessories and for flexible toe clamp mounting.

Fail-safe brake

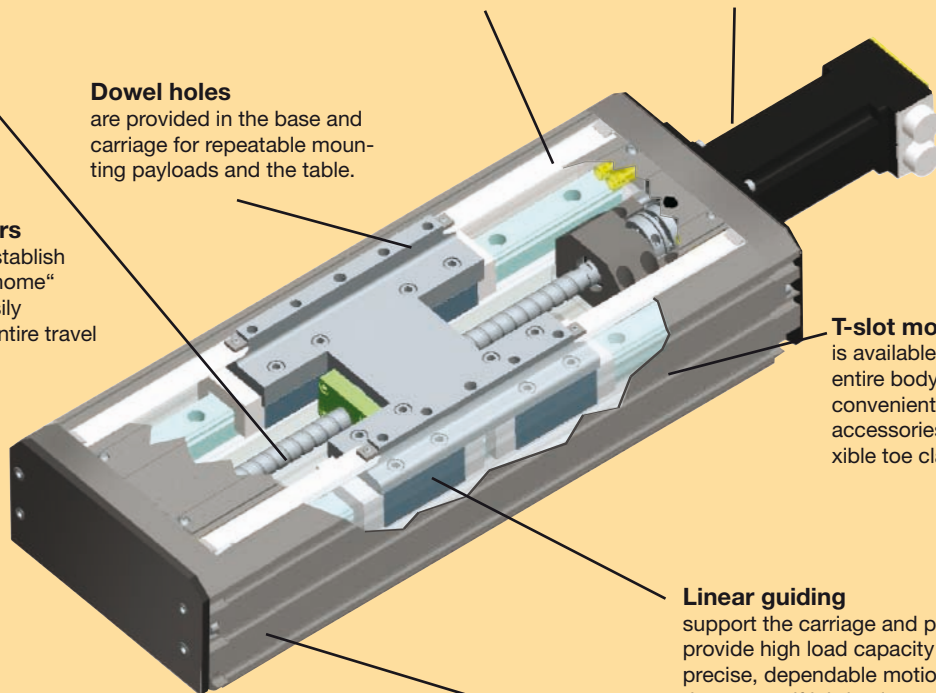
is available to prevent „back driving“ and halt carriage motion in vertical applications during power down (not shown).

Deep channel extruded body

Provides significant beam strength, stiffness and is machined to provide exceptional straightness and flatness.

Linear guiding

support the carriage and payload to provide high load capacity with smooth, precise, dependable motion. The bearings are self lubricating and therefore maintenance free over the life of the table.



HD Series Technical Data

HD085 series linear table (85 mm wide profile)



Common characteristics

Performance	Unit	Precision
Bidirectional repeatability ¹⁾	[μm]	± 8.0
Duty cycle	[%]	100
Max Acceleration	[m/s^2]	20
Rated normal load ²⁾	[N]	1667
Rated Axial Load ³⁾	[N]	882.5
Drive screw efficiency	[%]	90
Max. breakaway torque	[Nm]	0.21
Running torque	[Nm]	0.18
Linear bearing coefficient of friction	-	0.01
Carriage mass	[kg]	0.9

Travel dependent characteristics

Stroke [mm]	Positional accuracy ¹⁾	Straightness & flatness accuracy [μm]	Max. velocity			Input inertia			Total weight of axis [kg]
	[μm]		[mm/s]			[10^{-6}kgm^2]			
	Standard		5 mm	10 mm	20 mm	5 mm	10 mm	20 mm	
100	25	10	370	740	1480	1.826	1.925	2.322	3.86
200	25	15	370	740	1480	2.214	2.313	2.710	4.56
300	30	20	370	740	1480	2.601	2.701	3.097	5.26
400	35	25	370	740	1480	2.989	3.088	3.485	5.96
500	40	30	370	740	1480	3.377	3.476	3.873	6.66
600	45	35	260	520	1040	3.764	3.864	4.260	7.36
800	55	45	180	360	720	4.540	4.639	5.036	8.76
1000	65	55	-	240	480	-	5.414	5.811	10.16
1200	75	65	-	170	340	-	6.190	6.586	11.56

- ¹⁾ Accuracy and Repeatability apply to in-line motors only. Contact factory for parallel motor configurations. The accuracy and repeatability shown are for mechanics only and assume no error contribution from the motor. With standard 4000 count encoders an additional error must be added to both the accuracy and repeatability. For 5 mm lead add 1.25 μm , for 10 mm leads add 2.5 μm and for 20 mm leads add 5 μm of error to the accuracy and repeatability value stated above.
- ²⁾ Normal load capacities apply to centralized load on the linear bearing to a life of 2540 km. Refer to life/load charts to determine life of your particular application. Normal load capacity ratings are to be used as a reference of linear bearing load to life rating. This value SHOULD NOT be used as a safe loading value since other application factors (such as mounting) affect the safe load rating.
- ³⁾ Axial load capacities assumes an average axial load on a 10 mm lead ball screw and a life of 2540 km. Refer to life/load charts to determine life of your particular application.

HD125 series linear table (125 mm wide profile)



Common characteristics

Performance	Unit	Precision
Bidirectional repeatability ¹⁾	[μm]	± 8
Duty cycle	[%]	100
Max acceleration	[m/s^2]	20
Rated normal load ²⁾	[N]	6178
Rated axial load ³⁾	[N]	882.5
Drive screw efficiency	[%]	90
Max. breakaway torque		
0 to 1000 mm travel	[Nm]	0.25
1200 to 1500 mm travel		0.35
Running torque		
0 to 1000 mm travel	[Nm]	0.21
1200 to 1500 mm travel		0.32
Linear bearing coefficient of friction	-	0.01
Carriage mass	[kg]	2.2

Travel dependent characteristics

Stroke [mm]	Positional accuracy ¹⁾ [μm]	Straightness & flatness accuracy [μm]	Max. velocity				Input inertia				Total table weight [kg]
			[mm/s]				[10^{-5}kgm^2]				
			5 mm	10 mm	20 mm	40 mm	5 mm	10 mm	20 mm	40 mm	
200	25	15	370	740	1480	2240	3.061	3.416	4.834	14.386	11.50
300	30	20	370	740	1480	2240	3.449	3.804	5.222	15.612	12.75
400	35	25	370	740	1480	2240	3.837	4.191	5.610	16.837	14.00
500	40	30	315	630	1260	2240	4.224	4.579	5.997	18.062	15.25
600	45	35	240	480	960	1920	4.612	4.967	6.385	19.287	16.50
800	55	45	155	310	620	1240	5.387	5.742	7.160	7.936	19.00
1000	65	55	-	212	424	848	-	6.517	7.936	24.189	21.50
1200	75	65	-	-	420	840	-	-	21.577	27.251	24.00
1500	90	80	-	-	280	560	-	-	25.253	30.927	25.75

- ¹⁾ Accuracy and Repeatability apply to in-line motors only. Contact factory for parallel motor configurations. The accuracy and repeatability shown are for mechanics only and assume no error contribution from the motor. With standard 4000 count encoders an additional error must be added to both the accuracy and repeatability. For 5 mm lead add 1.25 μm , for 10 mm leads add 2.5 μm and for 20 mm leads add 5 μm of error to the accuracy and repeatability value stated above.
- ²⁾ Normal load capacities apply to centralized load on the linear bearing to a life of 2540 km. Refer to life/load charts to determine life of your particular application. Normal load capacity ratings are to be used as a reference of linear bearing load to life rating. This value SHOULD NOT be used as a safe loading value since other application factors (such as mounting) affect the safe load rating.
- ³⁾ Axial load capacities assumes an average axial load on a 10 mm lead ball screw and a life of 2540 km. Refer to life/load charts to determine life of your particular application.

HD185 Series Linear Table (185 mm wide Profile)



Common Characteristics

Performance	Unit	Precision
Bidirectional repeatability ¹⁾	[μm]	± 8
Duty cycle	[%]	100
Max Acceleration	[m/s^2]	20
Rated normal load ²⁾	[N]	14416
Rated axial load ³⁾	[N]	882.5
Drive screw efficiency	[%]	90
Max. breakaway torque		
0 to 1000 mm travel	[Nm]	0.32
1200 to 1600 mm travel		0.38
Running torque		
0 to 1000 mm travel	[Nm]	0.21
1200 to 1600 mm travel		0.35
Linear bearing coefficient of friction	-	0.01
Carriage mass	[kg]	3.6

Travel dependent characteristics

Stroke [mm]	Positional accuracy ¹⁾ [μm]	Straightness & flatness accuracy [μm]	Max. velocity				Input inertia				Total table weight [kg]
			[mm/s]				[10^{-5}kgm^2]				
			5 mm	10 mm	20 mm	40 mm	5 mm	10 mm	20 mm	40 mm	
300	30	20	370	740	1480	2240	3.446	4.174	7.087	23.178	22.9
400	35	25	370	740	1480	2240	3.833	4.562	7.475	24.403	24.6
500	40	30	355	710	1420	2240	4.221	4.949	7.862	25.628	26.4
600	45	35	270	540	1080	2000	4.609	5.337	8.250	26.854	28.2
800	55	45	165	330	660	1320	5.384	6.112	9.025	29.304	31.7
1000	65	55	-	230	460	920	-	6.888	9.801	31.754	35.2
1200	75	65	-	-	440	880	-	-	22.253	34.205	38.7
1400	85	75	-	-	340	680	-	-	25.003	36.655	42.2
1600	95	85	-	-	260	520	-	-	27.454	39.106	45.8

- ¹⁾ Accuracy and Repeatability apply to in-line motors only. Contact factory for parallel motor configurations. The accuracy and repeatability shown are for mechanics only and assume no error contribution from the motor. With standard 4000 count encoders an additional error must be added to both the accuracy and repeatability. For 5 mm lead add 1.25 μm , for 10 mm leads add 2.5 μm and for 20 mm leads add 5 μm of error to the accuracy and repeatability value stated above.
- ²⁾ Normal load capacities apply to centralized load on the linear bearing to a life of 2540 km. Refer to life/load charts to determine life of your particular application. Normal load capacity ratings are to be used as a reference of linear bearing load to life rating. This value SHOULD NOT be used as a safe loading value since other application factors (such as mounting) affect the safe load rating.
- ³⁾ Axial load capacities assumes an average axial load on a 10 mm lead ball screw and a life of 2540 km. Refer to life/load charts to determine life of your particular application.

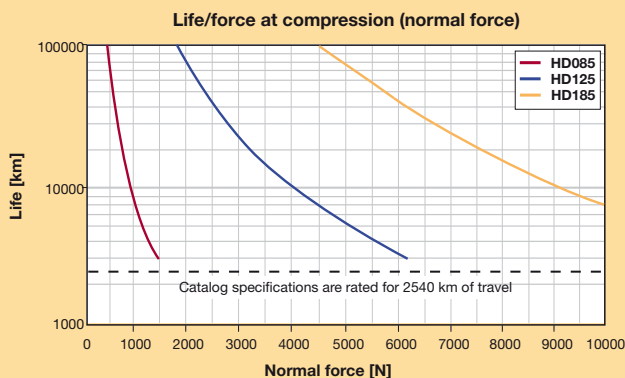
HD Series Life / Force Diagrams

The following performance information is provided as a supplement to the product specification pages. The following graphs are used to establish the table life relative to the applied loads. The useful life of a linear table at full catalog specifications is dependent on the forces acting upon it. These forces include both static components resulting from payload weight and dynamic components due to

acceleration/deceleration of the load. In multi-axis applications, the primary positioner at the bottom of the stack usually establishes the load limits for the combined axes. When evaluating life versus force, it is critical to include the weight of all positioning elements that contribute to the load supported by the primary axis. These charts are to be used in conjunction with the corresponding

formulas found in the product manuals at www.parker-eme.com/hd to establish the life/force for each bearing (4 per table).

Life/force at compression (normal force)



This graph provides evaluation of the support bearing life/load characteristics. The curves show the life/force relationship when the applied load

is centered on the carriage, perpendicular (normal force) to the carriage mounting surface.

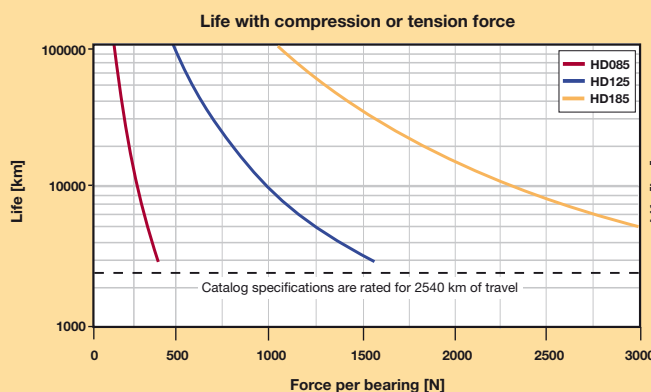
Several dimensions, which are specific to each linear positioning table model, and the load geometry are required for these computations. These dimensions are supplied in the catalog information for each positioner. The dimensions are referenced as follows:

- d1 - bearing block center-to-center longitudinal spacing
- d2 - bearing rail center-to-center lateral spacing
- d3 - Rail center-to-carriage mounting surface

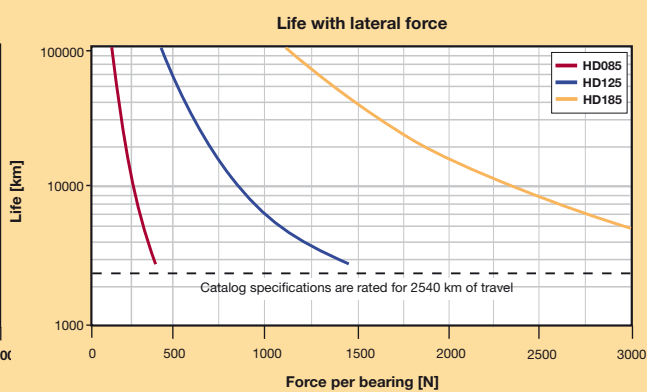
	d1	d2	d3
	[mm]		
HD085	51	42	53.5
HD125	65	70	57.5
HD185	105	115	42.0

See Parker Website
www.parker-eme.com/hd

Bearing life with compression or tension force



Bearing life at lateral force



HD Series Options

Deep channel extruded body

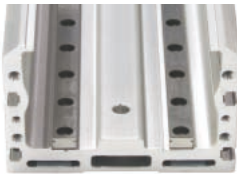
The foundation of the HD Series is an extruded body, designed to provide exceptional beam strength and rigidity with ease of use features, yet be aesthetically appealing. The extrusion



cross section has a high moment of inertia that strengthens and stiffens the unit. This enables users to span unsupported distances or cantilever the axis with minimal or no need for stiffening brackets. As an example, an HD may be toe clamped directly to the structural beams in a machine frame as opposed to having a plate cut to size and machined flat to serve as the positioner's mounting surface. The elimination of the mounting plate reduces overall design time and machine cost.

Precision machined tolerances

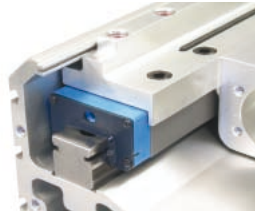
The extruded base provides the basic shape of the positioner but in its raw form, lacks the precision needed for most applications. Parker's proprietary machining processes are used to cut rail seats and flatten the bottom of the



extrusion to specifications better than jig plate. Some manufacturers will skip machining the bottom mounting surface to save cost but sacrifice precision and risk binding and other application problems. With the HD Series you gain the feature benefits of an extruded base and through Parker's machining capability, gain precision better than jig plate designs can offer.

Maintenance free linear bearings

Supporting the payload in the HD Series is a precision ground linear bearing set that offers precise, smooth motion. The two-rail, four-



bearing truck design provides high load capacity and is structured to handle cantilevered load unlike single rail designs. The linear bearings are self lubricating and therefore will not require re-lubrication for the life of the table.

IP30 rated environmental protection

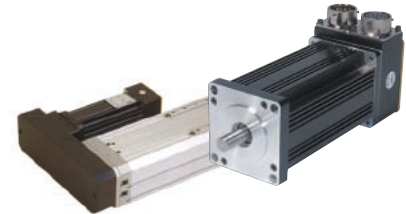
Often automation applications can be in dirty environments. For this reason the HD Series includes environmental protection beyond just a simple plate.



The HD Series uses a combination of hard cover and belt seal to provide a significant level of environmental protection for the tables internal components. This is ideal for larger objects like nuts, bolts, fingers, and larger debris. Furthermore it prevents the user from reaching into the running actuator. The sealing system will provide a measure of protection for dust but is not impervious. For these applications, pressurizing the HD positioner can be very effective.

High-performance brushless servo motors

Included with the HD Series are high-performance brushless servo motors.



These motors are performance-matched with the mechanical drive train and are inertia matched to maintain good load-to-rotor inertia ratios. Together, these characteristics offer excellent dynamic performance and stability.

As standard, the motors are offered in an in-line configuration and for space constrained applications, may be mounted in a parallel configuration. The parallel design utilizes a belt and pulley to transfer torque and includes additional pulley support bearings to protect the motor shaft and screw shank from over tension and fatigue failures.

Zero backlash shaft coupling

Included with the HD Series to transfer motor torque to the ballscrew is a high-performance shaft coupling. The coupling design uses stainless steel disks to transfer torque yet provide a measure of flexibility for slight shaft misalignments. The design is very light weight and adds minimal inertia. The combination of high stiffness and low inertia maintains high natural frequencies which is important for high performance applications.



Ground ballscrew drive train

At the heart of the HD Series drive train is a preloaded, precision ground ballscrew. This high-performance component offers high-speed, 100 % duty cycle operation with long life, plus the



better precision and surface finish of a ground screw compared with a rolled screw enables more accurate and quieter operation.

As standard, the HD Series offers 5, 10, and 20 mm lead options with a 40 mm lead available as a special. For most travels, the screws are 15 mm in diameter with the longer 20 mm lead and all 40 mm lead screws increasing to 20 mm in diameter. Like the linear bearings, the screws are self lubricating and will not require re-lubrication for the table's life.

Mounting features

The HD Series is designed for easy mounting. There are two basic methods of mounting an HD module into a machine. First, toe clamps (Part Number 101-1577-01) provide an easy method of bolting the HD down to a surface. For maximum flexibility, the toe clamps can be placed anywhere along the body extrusion and enable aligning mounting points with structural members of the machine frame. The second method utilizes taped holes in the base where the mounting hardware comes through the mounting surface into the HD module. The mounting pattern consists 4 tapped holes and 2 dowel holes and repeats at varying intervals depending on overall travel.



See the HD Series drawings for hole location details.

Dowel holes

As already mentioned the base of the HD Series includes dowel holes. These enable

repeatable mounting within a machine. Further, the carriage of the HD also



includes a set of dowel holes and is very useful for maintaining alignment if the payload is removed or replaced.

End mounting

In many applications, the positioner may be mounted with the carriage stationary such that the body moves. For these applications, the end of the HD includes tapped and dowel holes for mounting of the payload to the HD body. In many cases this avoids the cost and time of designing an awkward bracket to wrap from the bottom of the positioner around to the end.



Home/limit position sensors

As a standard option, home and end of travel limit sensors may be added to an HD positioner. These are industrially hardened, hall effect sensors that are triggered by a magnet mounted on the moving carriage. The sensors nest inside the extrusion T-slot and so do not add additional width or create obstructions. Further they are protected inside the T-slot which minimizes the opportunity for physical damage. For maximum flexibility, sensors are adjustable over the entire length and magnets are included on both sides of the table so sensors can be attached on either side. The sensors are offered in 4 variants with NPN (sinking) or PNP (sourcing) outputs and in normally open (NO) or normally closed (NC) logic. The sensor cables extend 300 mm and terminate into a M3 connector. If purchased as part of the positioner (LH option) each sensor will include a 5 m extension cable (P/N: 003-2918-01).



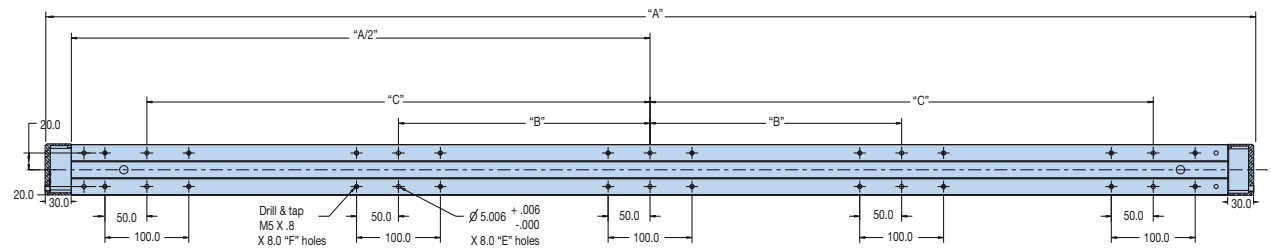
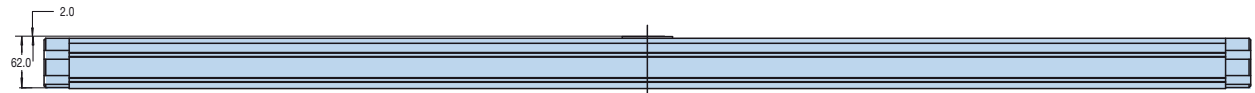
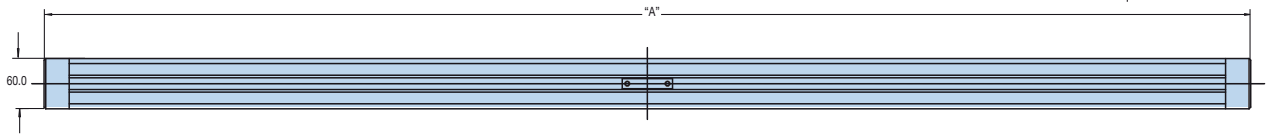
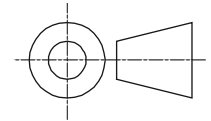
Power input	10-30 VDC
Voltage drop	<= 2.5 V
Continuous current	100 mA
Electrical protection	Short circuit, reverse polarity, and power up pulse suppression
Enclosure	IP67 rated polyamide housing with PVC cable jacket
Wire colors	brown – mains (+) black - signal blue - ground (-)
Repeatability	0.1 mm max.

Spare part number	Output type	Logic	Cable type
006-1994-01	N.O.	NPN (sinking)	300 mm to M3 connector
006-1994-02	N.O.	PNP (sourcing)	300 mm to M3 connector
006-1994-03	N.O.	NPN (sinking)	300 mm to M3 connector
006-1994-04	N.O.	PNP (sourcing)	300 mm to M3 connector
003-2918-01	—	—	5.0 m extension cable

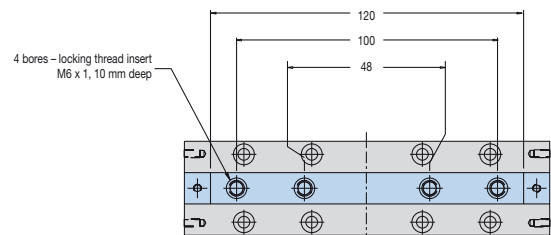
HD Series Dimensions

HD015 Series Dimensions

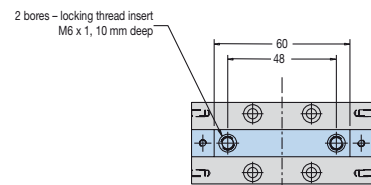
Dimensions [mm]



Bottom View



VL option - long carriage

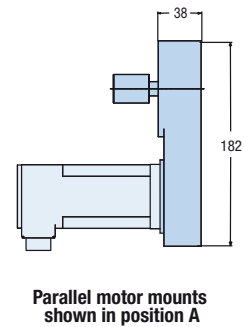
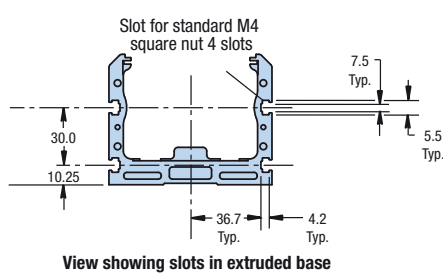
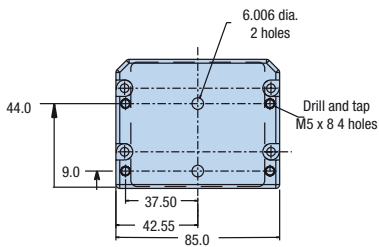
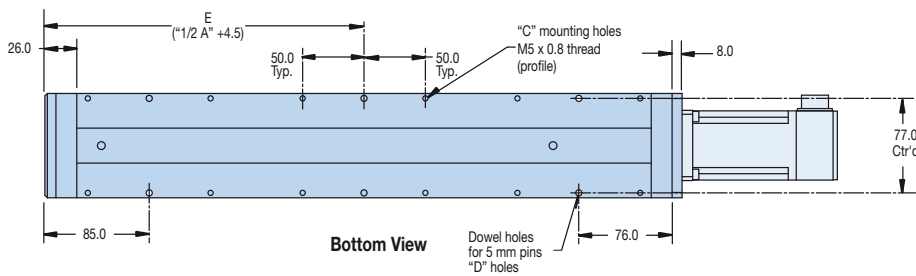
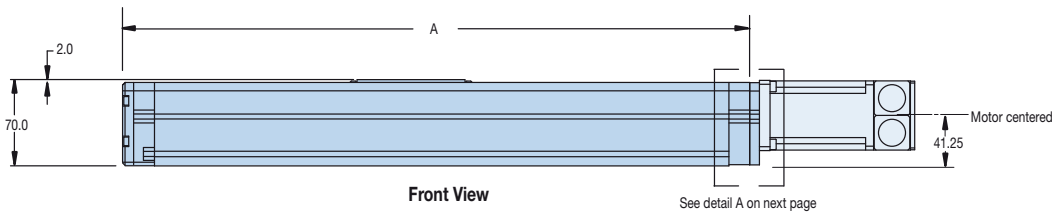
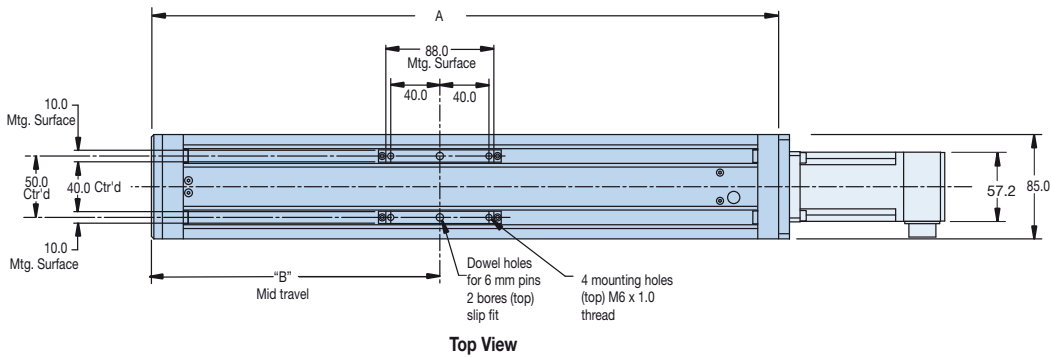
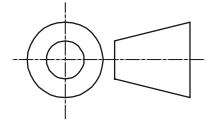


NL option - short carriage

Model	Stroke [mm]	Dimensions [mm]				
		A	B	C	E	F
HD015T01	100	340.0	-	-	2	4
HD015T02	200	440.0	-	-	2	4
HD015T03	300	540.0	-	150.0	6	12
HD015T04	400	640.0	-	200.0	6	12
HD015T05	500	740.0	-	250.0	6	12
HD015T06	600	840.0	-	300.0	6	12
HD015T07	700	940.0	-	345.0	6	12
HD015T08	800	1040.0	-	400.0	6	12
HD015T09	900	1140.0	-	450.0	6	12
HD015T10	1000	1240.0	-	500.0	6	12
HD015T11	1100	1340.0	-	550.0	6	12
HD015T12	1200	1440.0	300.0	600.0	10	20
HD015T13	1300	1540.0	325.0	650.0	10	20
HD015T14	1400	1640.0	350.0	700.0	10	20
HD015T15	1500	1740.0	375.0	750.0	10	20
HD015T16	1600	1840.0	400.0	800.0	10	20
HD015T17	1700	1940.0	425.0	850.0	10	20
HD015T18	1800	2040.0	450.0	900.0	10	20
HD015T19	1900	2140.0	475.0	950.0	10	20
HD015T20	2000	2240.0	500.0	1000.0	10	20

Abmessungen HD085

Dimensions [mm]

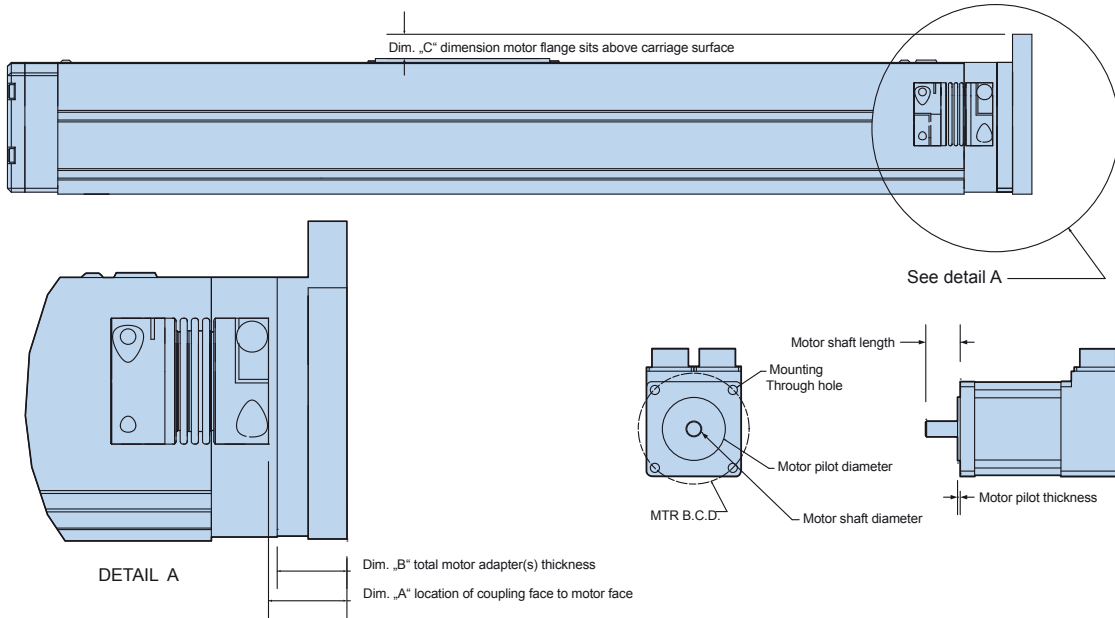
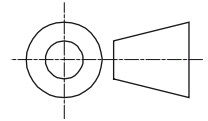


Model	Stroke	A	B	C	D	E
		[mm]				
HD085T01	100	311	135	4	2	160
HD085T02	200	411	185			210
HD085T03	300	511	235			260
HD085T04	400	611	285			310
HD085T05	500	711	335			360
HD085T06	600	811	385			410
HD085T07	700	911	435	12	6	460
HD085T08	800	1011	485			510
HD085T09	900	1111	535			560
HD085T10	1000	1211	585			610
HD085T11	1100	1311	635			660
HD085T12	1200	1411	685			710

HD085 Inline

Motor Flange/Coupling Assembly Options

Dimensions [mm]

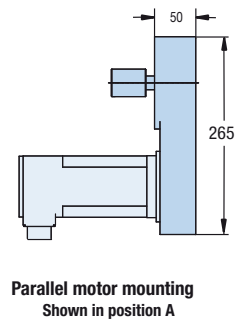
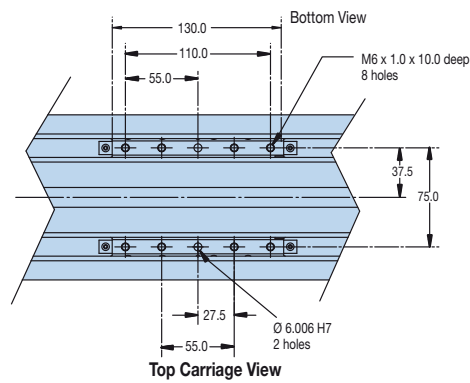
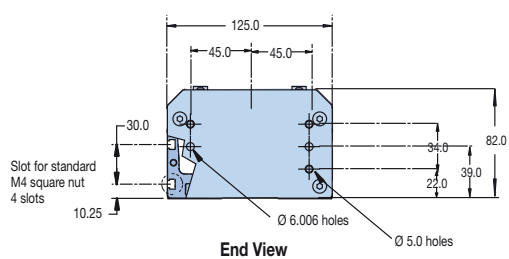
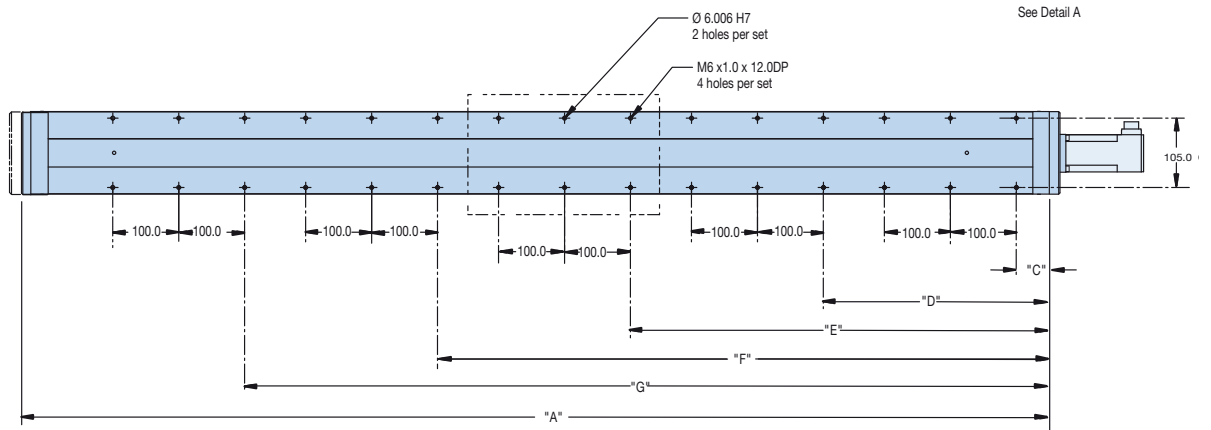
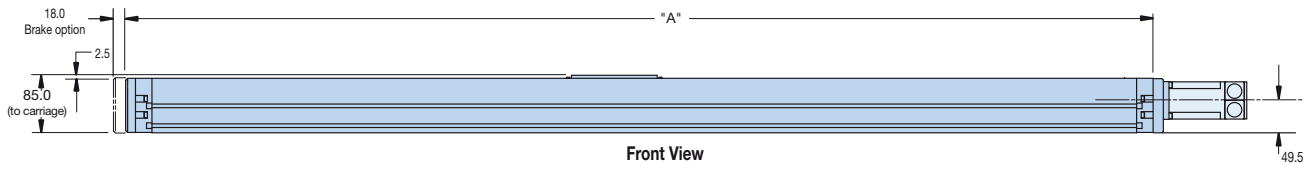
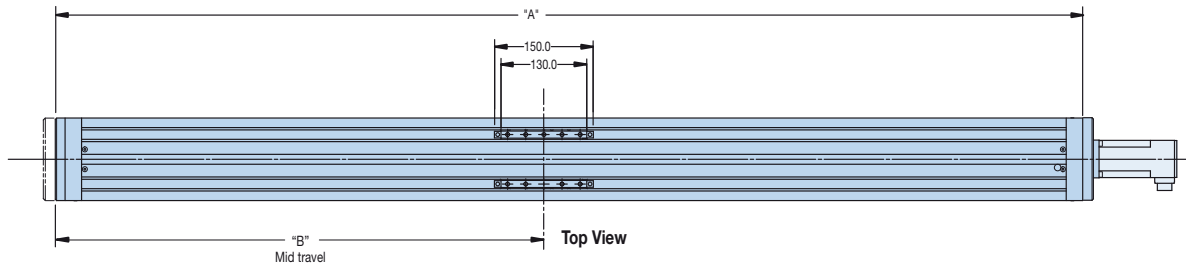
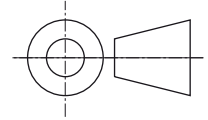


Motor adaptor Art. no.	Example motors	Dimensions [mm]								
					Required motor specifications					
		A	B	C	Pilot Ø	Pilot depth	Bolt circle Ø	Bolt hole size	Shaft Ø	Shaft length
F031-HD085	SMH60B8/9, SMB60B8/9, HDY55	12.0	8.0	-	40.0	3.0	63.0	5.5	9.0	20.0
F071-HD085	SMH60B5/11, HDY70	10.0*	10.5	2.0	60.0	3.0	75.0	5.5	11.0	23.0

* Note: Coupling must be fixed at the motor first.

HD125 Series Dimensions

Dimensions [mm]

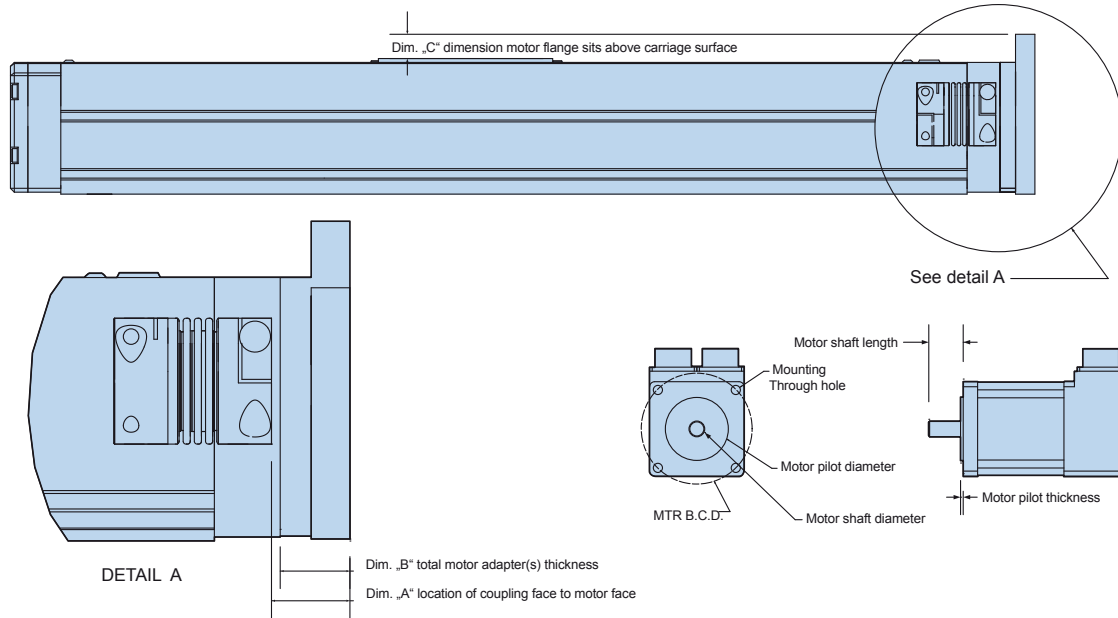
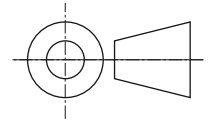


Model	Travel [mm]	Dimensions [mm]						
		A	B	C	D	E	F	G
HD125T02	200	508.0	239.5	-	-	135.0	-	-
HD125T03	300	608.0	289.5	50.0	-	185.0	-	320.0
HD125T04	400	708.0	339.5	50.0	-	235.0	-	420.0
HD125T05	500	808.0	389.5	50.0	-	285.0	-	520.0
HD125T06	600	908.0	439.5	50.0	-	335.0	-	620.0
HD125T08	800	1108.0	539.5	50.0	-	435.0	-	820.0
HD125T10	1000	1308.0	639.5	50.0	-	535.0	-	1020.0
HD125T12	1200	1558.0	737.0	50.0	342.5	635.0	927.5	1220.0
HD125T15	1500	1858.0	887.0	50.0	417.5	785.0	1152.5	1520.0

HD125 Inline

Flange/coupling assembly options

Dimensions [mm]



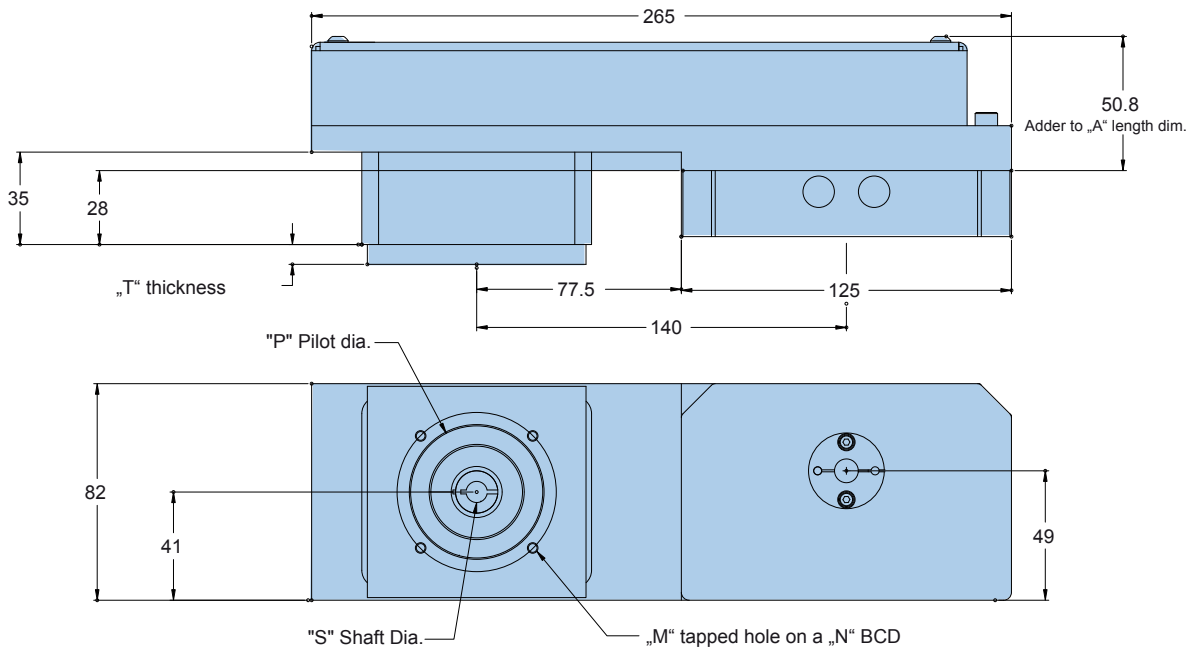
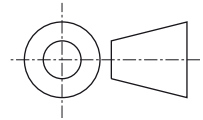
Motor adaptor Art. no.	Example motors	Dimensions [mm]								
					Required motor specifications					
		A	B	C	Pilot Ø	Pilot depth	Bolt circle Ø	Bolt hole size	Shaft Ø	Shaft length
F031-HD125	SMH60B8/9, SMB6060B8/9, HDY55	12.0	8.0	—	40.0	3.0	63.0	5.5	9.0	20.0
F071-HD125	SMH60B5/11, HDY70	12.0	10.5	—	60.0	3.0	75.0	5.5	11.0	23.0
F111-HD125	SMH82B8/14	15.0*	20.0	7.0	80.0	3.5	100.0	6.6	14.0	30.0

* Note: Coupling must be fixed at the motor first.

HD125 Parallel

Motor flange assembly options

Dimensions [mm]

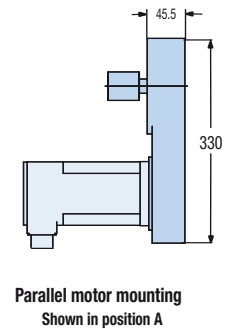
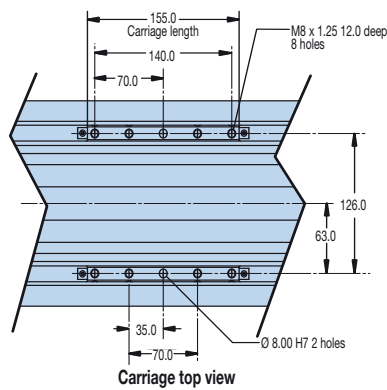
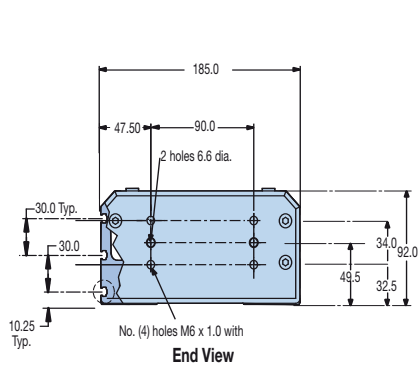
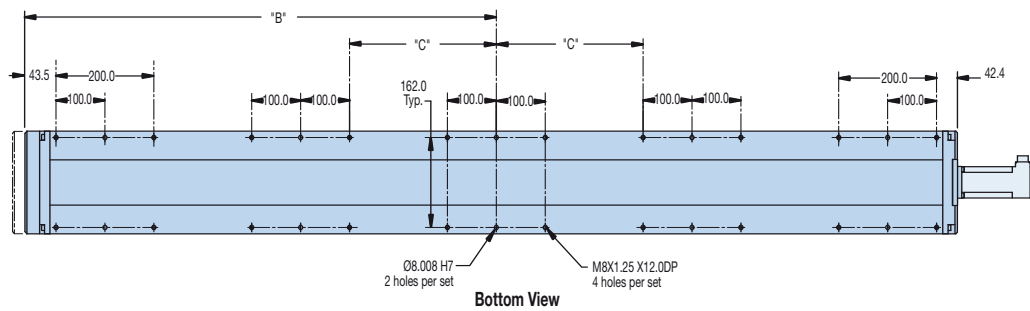
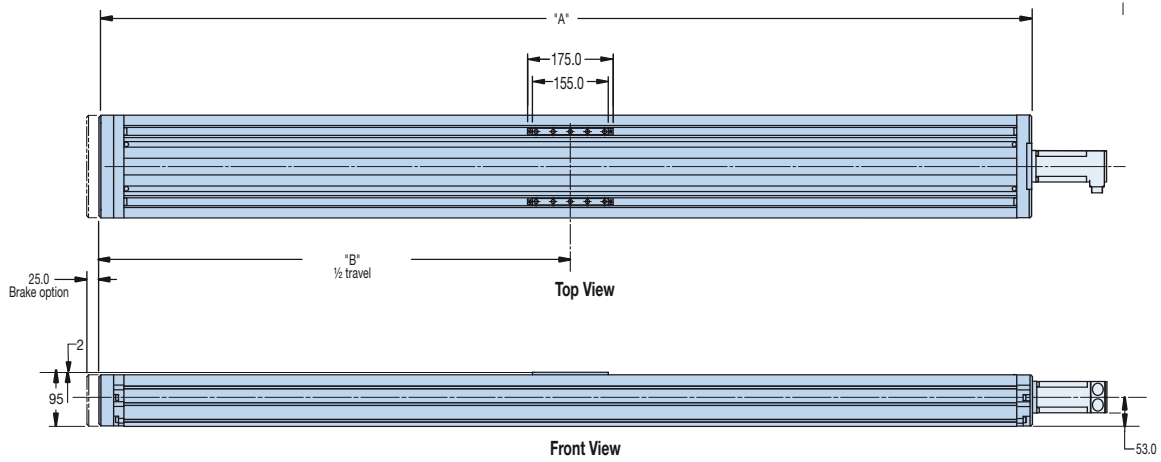
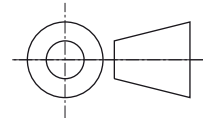


NOTE: Shown as side "B" ("A" is mirror image rotated 180° about table screw centerline)

Motor adapter Art. no.	Example motors	Dimensions [mm]				
		M	N	P	S	T
A031-HD125 or B031-HD125	SMH60B8/9, SMB60B8/9, HDY55	M5 x 0.8	63.0	40.0	9.0	7.5
A071-HD125 or B071-HD125	SMH60B5/11, HDY70	M5 x 0.8	75.0	60.0	11.0	–
A111-HD125 or B111-HD125	SMH82B8/14	M6 x 1.0	100.0	80.0	14.0	10.0

HD185 Series Dimensions

Dimensions [mm]

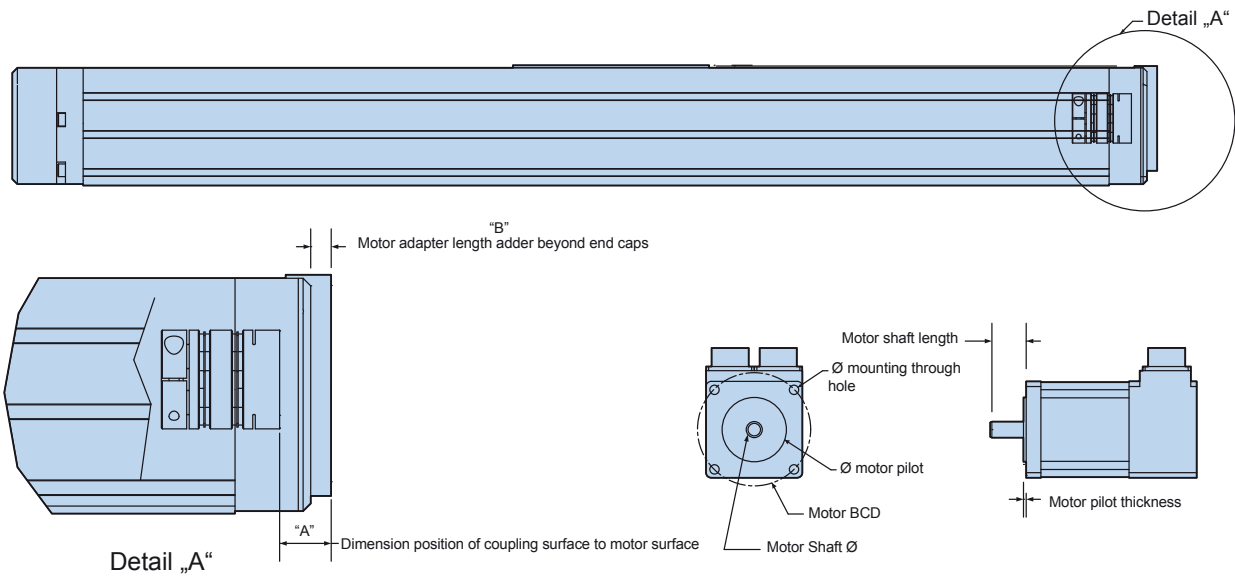
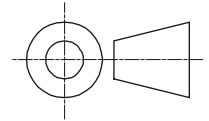


Model	Travel [mm]	Dimensions [mm]		
		A	B	C
HD185T03	300	585.9	293.5	—
HD185T04	400	685.9	343.5	—
HD185T05	500	785.9	393.5	—
HD185T06	600	885.9	443.5	—
HD185T08	800	1085.9	543.5	—
HD185T10	1000	1285.9	643.5	—
HD185T12	1200	1485.9	743.5	200.0
HD185T14	1400	1685.9	843.0	250.0
HD185T16	1600	1885.9	943.0	300.0
HD185T18	1800	2085.9	1043.0	350.0
HD185T20	2000	2285.9	1143.5	400.0

HD185 Inline

Flange/coupling assembly options

Dimensions [mm]

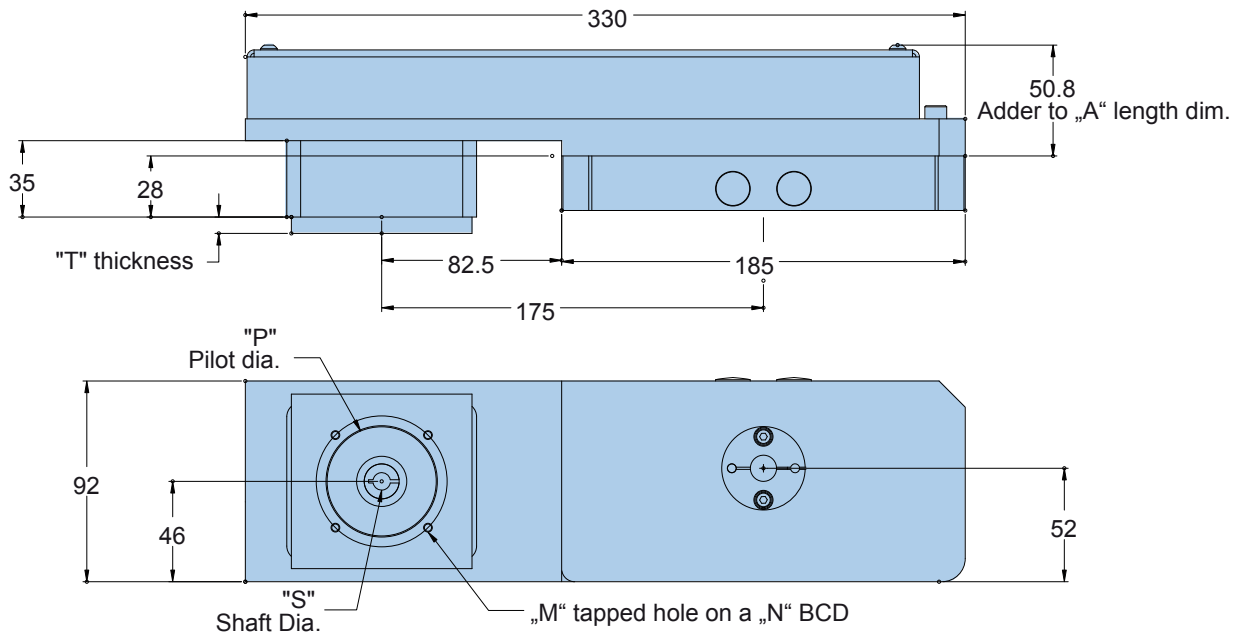
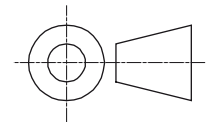


Motor Adapter Art. no.	Example motors	Dimensions [mm]							
		Required motor specifications							
		A	B	Pilot Ø	Pilot depth	Bolt circle Ø	Bolt hole size	Shaft Ø	Shaft length
F031-HD185	SMH60B8/9, SMB60B8/9, HDY55	10.0	—	40.0	3.0	63.0	5.5	9.0	20.0
F071-HD185	SMH60B5/11, HDY70	10.0	—	60.0	3.0	75.0	5.5	11.0	23.0
F111-HD185	SMH82B8/14	15.0	0.5	80.0	3.5	100.0	6.6	14.0	30.0

HD185 Parallel

Motor flange assembly options

Dimensions [mm]



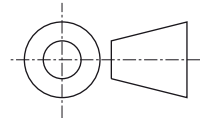
NOTE: Shown as side "B" ("A" is mirror image rotated 180° about table screw centerline)

Motor adapter Art. no.	Example motors	Dimensions [mm]				
		M	N	P	S	T
A031-HD185 or B031-HD185	SMH60B8/9, SMB60B8/9, HDY55	M5 x 0.8	63.0	40.0	9.0	7.5
A071-HD185 or B071-HD185	SMH60B5/11, HDY70	M5 x 0.8	75.0	60.0	11.0	-
A111-HD185 or B111-HD185	SMH82B8/14	M6 x 1.0	100.0	80.0	14.0	10.0

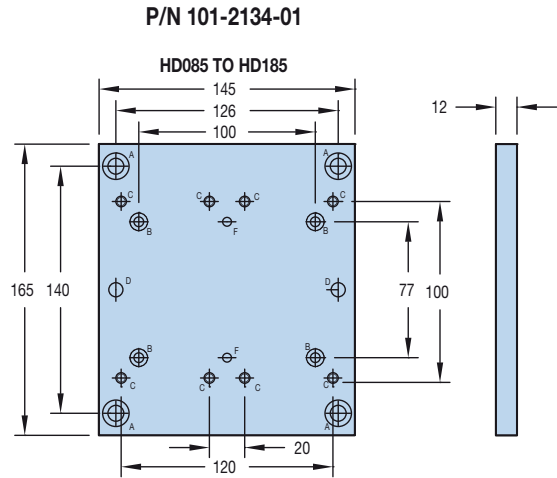
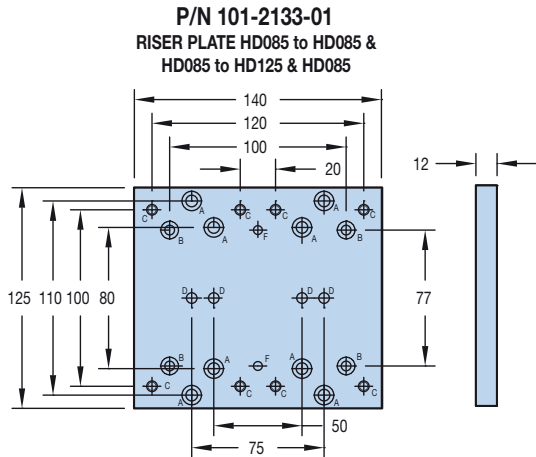
HD Series Accessories

These adaptor plates can be used for xy-pinning (2 axes). Additional toe clamps are not required.

Dimensions [mm]

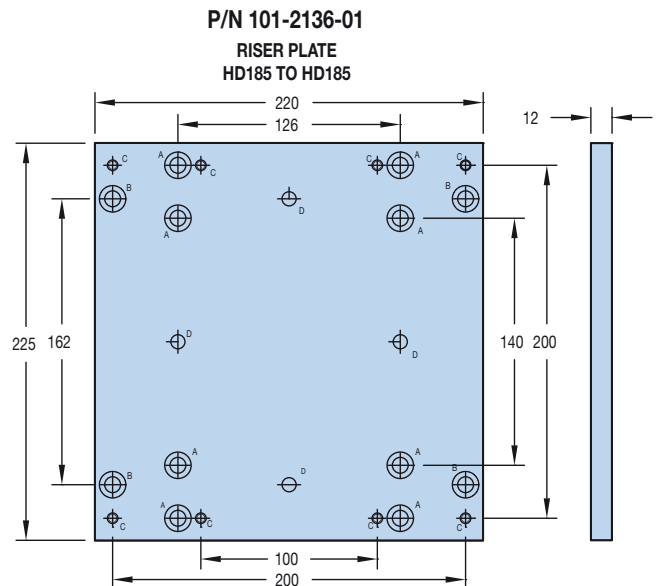
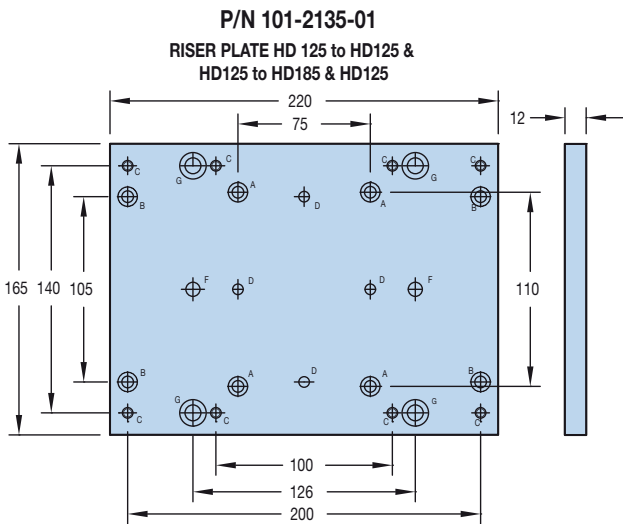


HD Series XY adapter dimensions



Hole	Description [mm]	Quantity
A	Ø 6.6 thru hole with a counterbored Ø 11.0 x 7.0 deep hole	8
B	Ø 5.5 Thru hole with a counterbored Ø 10.0 x 6.0 far side	4
C	Drill & tap thru M6 x 1	8
D	Ø 6.006 ^{+0.006} / _{-0.000}	4
F	Ø 5.006 ^{+0.006} / _{-0.000}	2

Hole	Description [mm]	Quantity
A	Ø 9.0 Thru hole with a counterbored Ø 15.0 x 9.0 deep hole	4
B	Ø 5.5 Thru hole with a counterbored Ø 10.0 x 6.0 far side	4
C	Drill & tap thru M6 x 1	8
D	Ø 8.006 ^{+0.006} / _{-0.000}	4
F	Ø 5.006 ^{+0.006} / _{-0.000}	2



Hole	Description [mm]	Quantity
A	Ø 6.6 Thru hole with a counterbored Ø 11.0 x 7.0 deep hole	4
B	Ø 6.6 Thru hole with a counterbored Ø 11.0 x 7.0 deep hole - far side	4
C	Drill & tap thru M6 x 1	8
D	Ø 6.006 ^{+0.006} / _{-0.000}	4
F	Ø 8.006 ^{+0.006} / _{-0.000}	2
G	Ø 9.0 thru hole with a counterbored Ø 15.0 x 9.0 deep hole	4

Hole	Description [mm]	Quantity
A	Ø 9.0 Thru hole with a counterbored Ø 15.0 x 9.0 deep hole	8
B	Ø 9.0 Thru hole with a counterbored Ø 15.0 x 9.0 deep hole - far side	4
C	Drill & tap thru M6 x 1	8
D	Ø 8.006 ^{+0.006} / _{-0.000}	4

HD Series Ordering Information

HD015 Series Ordering Information

Fill in an order code from each of the numbered fields to create a complete model order code

	1	2	3	4
Order example	HD015	T04	NL	R1

1 Series

HD015 15 mm profile width

2 Travel - mm

T01	100
T02	200
T03	300
T04	400
T05	500
T06	600
T08	800
T10	1000
T12	1200
T14	1400
T16	1600
T18	1800
T20	2000

3 Carriage option

NL	Single bearing truck
VL	Double bearing truck

4 Enclosure rating

R1	IP30, maintenance free
----	------------------------

HD085 Series Ordering Information

Fill in an order code from each of the numbered fields to create a complete model order code.

	1	2	3	4	5	6	7	8
Order example	HD085	T08	S	D02	M020	LH2	B1	R1

1 Series	HD085 85 mm profile width	7 Brake*	B1 None * See motor options
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2 Travel - mm*	T01 100 T02 200 T03 300 T04 400 T05 500 T06 600 T08 800 T10 1000 T12 1200	8 Enclosure rating	R1 IP30, Maintenance free
-----------------------	---	---------------------------	----------------------------------

3 Grade	S Standard grade
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4 Drive	D02* 5 mm lead D03 10 mm lead D04 20 mm lead * Maximum travel for D02 (5 mm lead) = 800 mm (T08).
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5 Motor adapter options	M000 None
--------------------------------	------------------

In-line motor mount

- F031** prepared for SMB/SMH60B8/9 or HDY55
- F071** prepared for SMB/SMH60B5/11 or HDY70

6 Home/limit switch*	LH1 None LH2 NPN standard (NC limits, NO home) LH3 PNP standard (NC limits, NO home) LH4 PNP standard (NO limits, NO home)
-----------------------------	---

* with 5 m extension cable , sensor packs complete (2 x limit + 1 x home)

HD125 Series Ordering Information

Fill in an order code from each of the numbered fields to create a complete model order code.

	1	2	3	4	5	6	7	8
Order example	HD125	T04	S	D02	M030	LH2	B1	R1

1 Series	6 Home/limit switch*
-----------------	-----------------------------

HD125 125 mm profile width

LH1 None
LH2 NPN standard (NC limits, NO home)
LH3 PNP standard (NC limits, NO home)
LH4 PNP standard (NO limits, NO home)
 * with 5 m extension cable, sensor packs complete (2 x limit + 1 x home)

2 Travel - mm*

T02 200
T03 300
T04 400
T05 500
T06 600
T08 800
T10 1000
T12 1200
T15 1500

* Maximum travel for D02 (5 mm lead) = 800 mm (T08)
 Maximum travel for D03 (10 mm lead) = 1000 mm (T10)

7 Brake*

B1 None
B2 Brake
 * See motor options

8 Enclosure rating

R1 IP30, maintenance free

3 Grade

S Standard grade

4 Drive

D02 5 mm lead
D03 10 mm lead
D04 20 mm lead
D07* 40 mm lead

* D07 option will lose 50 mm of travel below 1100 mm stroke units.

5 Motor adapter options

M000 None

In-line motor mount

F031 prepared for SMB/SMH60B8/9 or HDY55
F071 prepared for SMB/SMH60B5/11 or HDY70
F111 prepared for SMB/SMH82B8/14

Parallel position A

A031 prepared for SMB/SMH60B8/9 or HDY55
A071 prepared for SMB/SMH60B5/11 or HDY70
A111 prepared for SMB/SMH82B8/14

Parallel position B

B031 prepared for SMB/SMH60B8/9 or HDY55
B071 prepared for SMB/SMH60B5/11 or HDY70
B111 prepared for SMB/SMH82B8/14

HD185 Series Ordering Information

Fill in an order code from each of the numbered fields to create a complete model order code.

	1	2	3	4	5	6	7	8
Order example	HD185	T04	S	D02	M030	LH2	B1	R1

<p>1 Series HD185 185 mm profile width</p>	<p>6 Home/limit switch* LH1 None LH2 NPN standard (NC limits, NO home) LH3 PNP standard (NC limits, NO home) LH4 PNP standard (NO limits, NO home) * with 5 m extension cable, sensor packs complete (2 x limit + 1 x home)</p>
<p>2 Travel - mm* T03 300 T04 400 T05 500 T06 600 T08 800 T10 1000 T12 1200 T14 1400 T16 1600 T18 1800 T20 2000</p>	<p>7 Brake* B1 None B2 Brake * See motor options</p>
<p>3 Grade S Standard grade</p>	<p>8 Enclosure rating R1 IP30, maintenance free</p>
<p>4 Drive D02* 5 mm lead D03 10 mm lead D04 20 mm lead D07 40 mm lead * Maximum travel for D02 (5 mm lead) = 800 mm (T08) Maximum travel for D03 (10 mm lead) = 1000 mm (T10)</p>	
<p>5 Motor adapter options M000 None</p> <p>In-line motor mount F031 prepared for SMB/SMH60B8/9 or HDY55 F071 prepared for SMB/SMH60B5/11 or HDY70 F111 prepared for SMB/SMH82B8/14</p> <p>Parallel position A A031 prepared for SMB/SMH60B8/9 or HDY55 A071 prepared for SMB/SMH60B5/11 or HDY70 A111 prepared for SMB/SMH82B8/14</p> <p>Parallel position B B031 prepared for SMB/SMH60B8/9 or HDY55 B071 prepared for SMB/SMH60B5/11 or HDY70 B111 prepared for SMB/SMH82B8/14</p>	



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