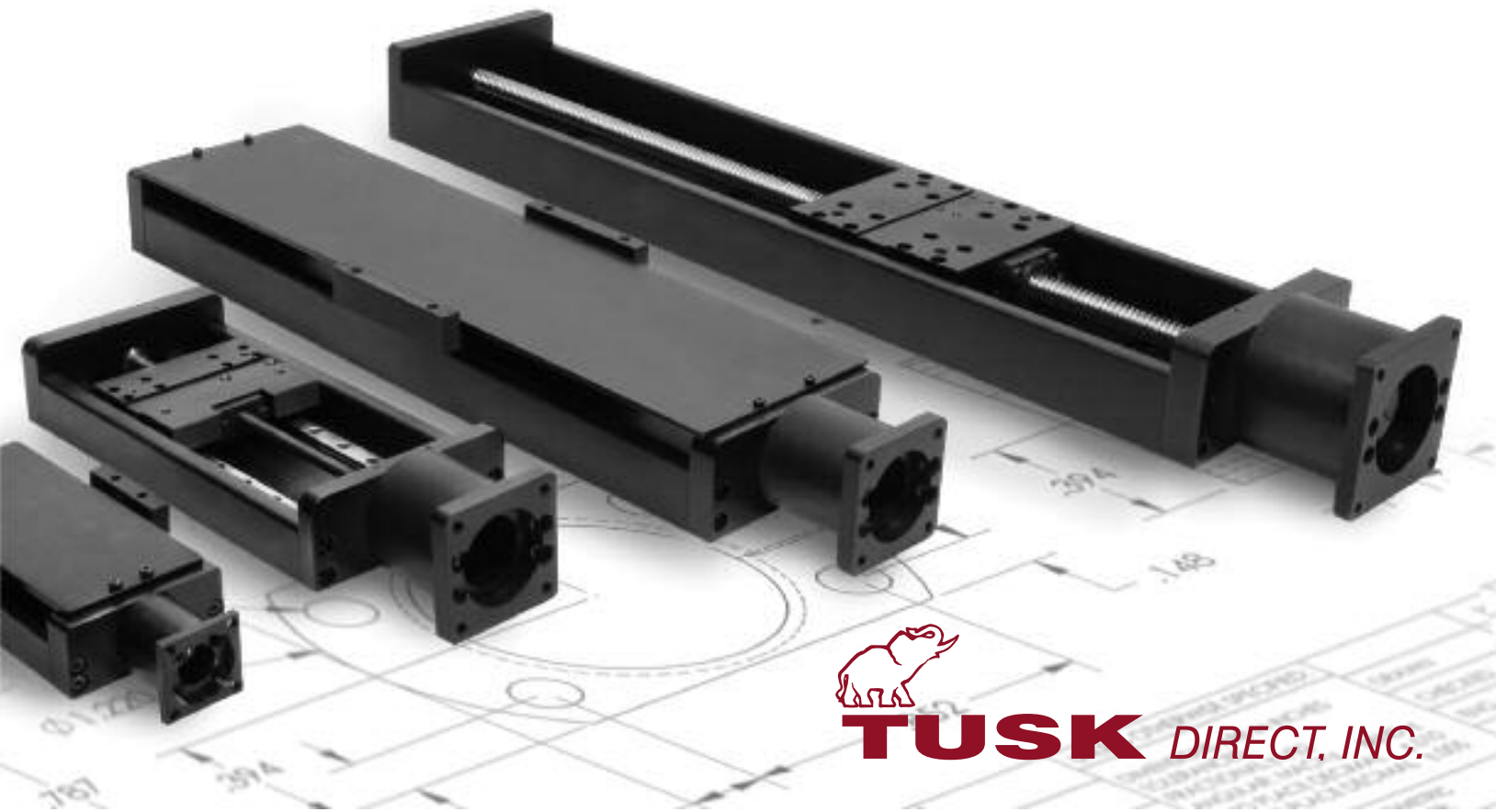


TA Linear Actuators

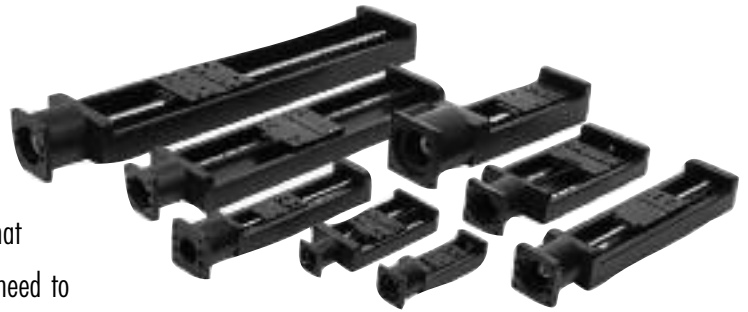
Ball and Lead Screw Actuated Stages



TUSK DIRECT, INC.

TA / TA DW SERIES

TUSK Direct's TA series linear actuators offer the benefits of a space-saving design, fast and simple assembly, long life, and a competitive price. The rigid enclosed aluminum box structure provides a compact envelope that incorporates the linear bearing and drive mechanism. Integrating all components into a single unit that includes the motor mount, saves assembly time and eliminates the need to source additional parts. TUSK'S TA linear actuators are competitively priced and will outlast unsupported and unenclosed bearing drive assemblies.



TUSK'S integrated design offers low friction and high accuracy in a compact, lightweight package. TA series linear actuators are available in travel lengths up to 410 millimeters. They feature an integrated anti-friction slide or slides and are actuated with a ball screw or Teflon coated lead screw drive mechanism. These integrated recirculating slide guides provide friction-free movement and have a coefficient of friction of only 0.01. Our DW series (double wide) is engineered to create a wider mounting platform while still maintaining the same low profile height as our standard width TA actuators. This double wide design is ideal for applications that need a greater carriage mounting area or where axial play must be minimized.

The anti-backlash lead screw nut is spring-loaded to ensure positive movement when changing direction. The units offer straight-line accuracy of less than 2 microns and repeatability of less than 1 micron. They deliver 254 million mm of travel at their full load rating.

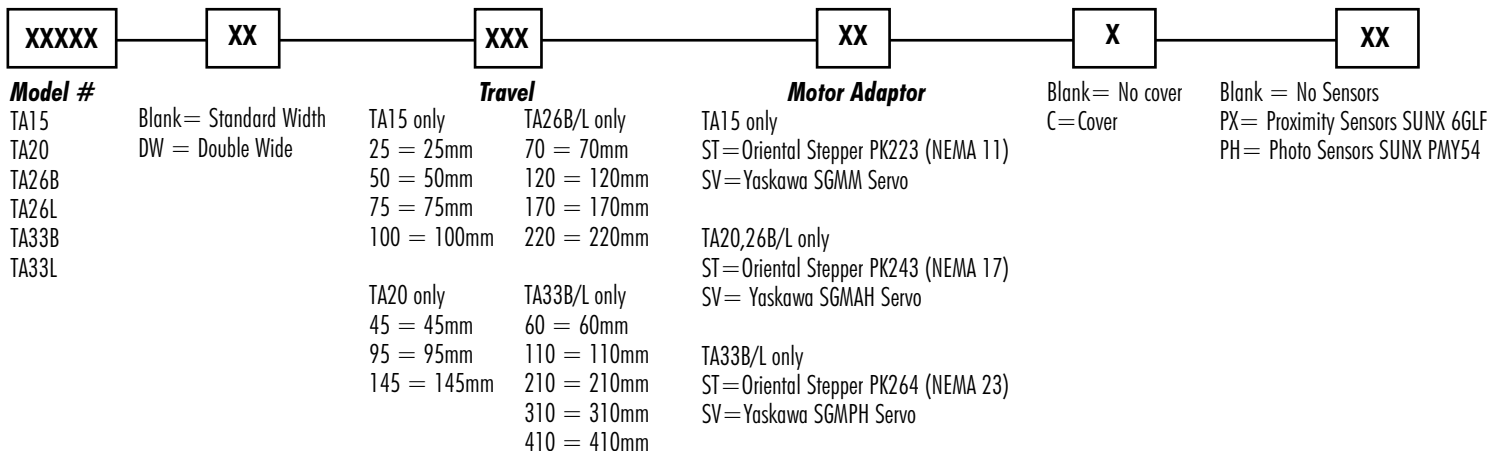
Options for TUSK TA series linear actuators include an Oriental PK223, PK243 or PK264 stepper motor, or a Yaskawa SGMM, SGMAH or SGMPH servomotor. Mounts are available for other styles of motors. Photoelectric or proximity position sensors are available. An anti-dust containment cover protects moving components while also preventing particulate emissions. Load capacities range from 150 newtons to 900 newtons.

TUSK can provide special leads, diameters, couplings, motor mounts, and vary the size, type and travel of slides on request. TUSK'S website offers access to 3D CAD drawings which may be downloaded into the user's CAD system in a number of native CAD formats. Life and moment load calculators are also available to determine the suitability of a particular linear bearing for the intended application.

TA Specifications

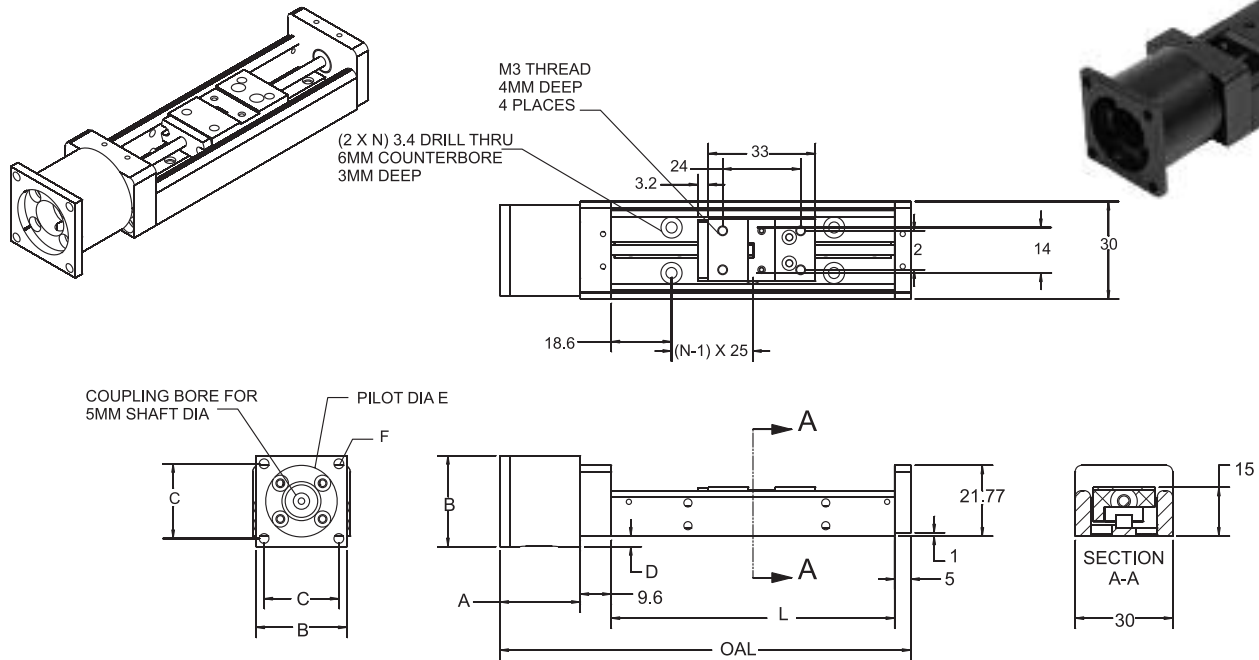
	TA15/TA15DW	TA20/TA20DW	TA26B/TAL26BDW	TA26L/TA26LDW	TA33B/TA33BDW	TA33L/TA33LDW
Drive:	Teflon Coated lead screw 3.17mm dia with 1mm lead	Teflon Coated lead screw 4.8mm dia with 1mm lead	Ball screw 6mm dia with 1mm lead	Teflon coated lead screw 6.35mm dia with 1mm lead	Ball screw 8mm dia with 5mm lead	Teflon coated lead screw 9.53mm dia with 5mm lead
Motor adaptors for:	Stepper: Oriental PK223 Servo: Yaskawa SGMM	Stepper: Oriental PK243 Servo: Yaskawa SGMAH	Stepper: Oriental PK243 Servo: Yaskawa SGMAH	Stepper: Oriental PK243 Servo: Yaskawa SGMAH	Stepper: Oriental PK264 Servo: Yaskawa SGMPH	Stepper: Oriental PK264 Servo: Yaskawa SGMPH
Coefficient of friction:	0.01	0.01	0.01	0.01	0.01	0.01
Life:	254 million mm	254 million mm	254 million mm	254 million mm	254 million mm	254 million mm
Travel:	25, 50, 75 and 100mm	45, 95, and 145mm	70, 120, 170 and 220mm	70, 120, 170 and 220mm	60, 110, 210, 310 and 410mm	60, 110, 210, 310 and 410mm
Anti-friction slide:	Recirculating Slide Guide	Recirculating Slide Guide	Recirculating Slide Guide	Recirculating Slide Guide	Recirculating Slide Guide	Recirculating Slide Guide
Load Capacity:	150 Newtons	200 Newtons	600 Newtons	300 Newtons	900 Newtons	400 Newtons
Positional Repeatability:	4µm	4µm	10µm	4µm	10µm	4µm
Positioning Accuracy:	50µm	50µm	90µm	50µm	100µm	50µm
Running Parallelism:	10µm	15µm	25µm	25µm	25µm	15µm
Backlash:	zero	zero	20µm	zero	20µm	zero
Linear Speed:	100mm/sec	100mm/sec	200mm/sec	100mm/sec	200mm/sec	100mm/sec
Finish:	Black Anodized	Black Anodized	Black Anodized	Black Anodized	Black Anodized	Black Anodized
Materials:	Aluminum base and carriage	Aluminum base and carriage	Aluminum base and carriage	Aluminum base and carriage	Aluminum base and carriage	Aluminum base and carriage
Sensors:	Photo or Proximity	Photo or Proximity	Photo or Proximity	Photo or Proximity	Photo or Proximity	Photo or Proximity
Notes:	Other leads available upon request.	Other leads available upon request. No lubrication required.	Other leads available upon request. Lubricate with grease/oil before use.	Other leads available upon request. No lubrication required.	Other leads available upon request. Lubricate with grease/oil before use.	Other leads available upon request. No lubrication required.

Nomenclature

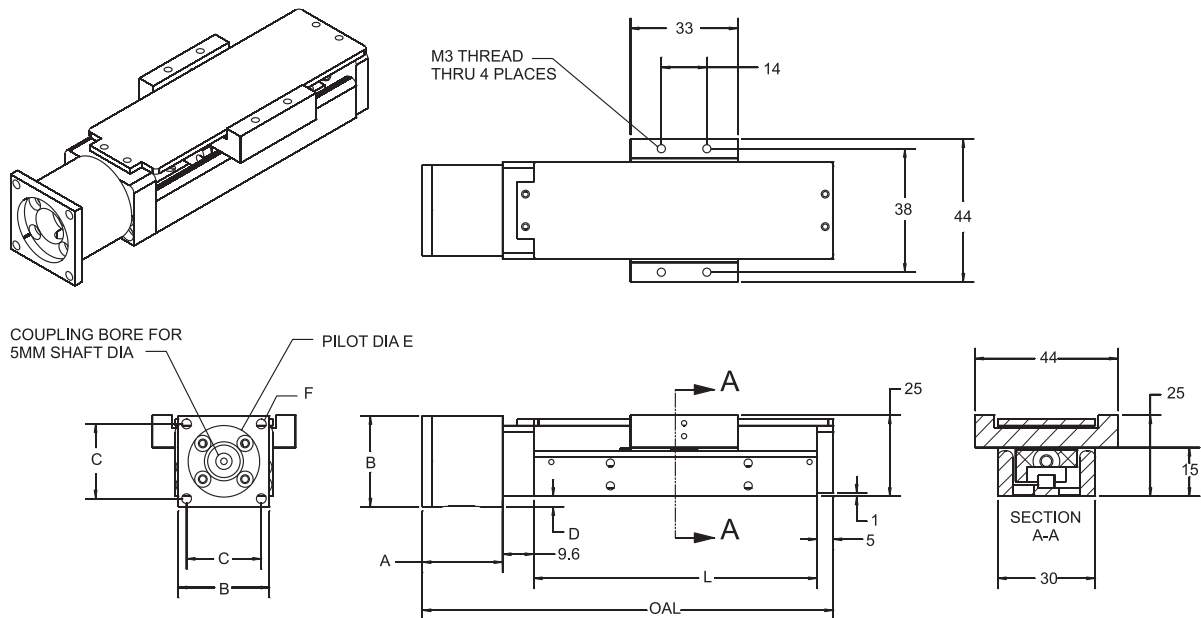


TA 15

TA 15 All units are in mm



TA 15 With Cover

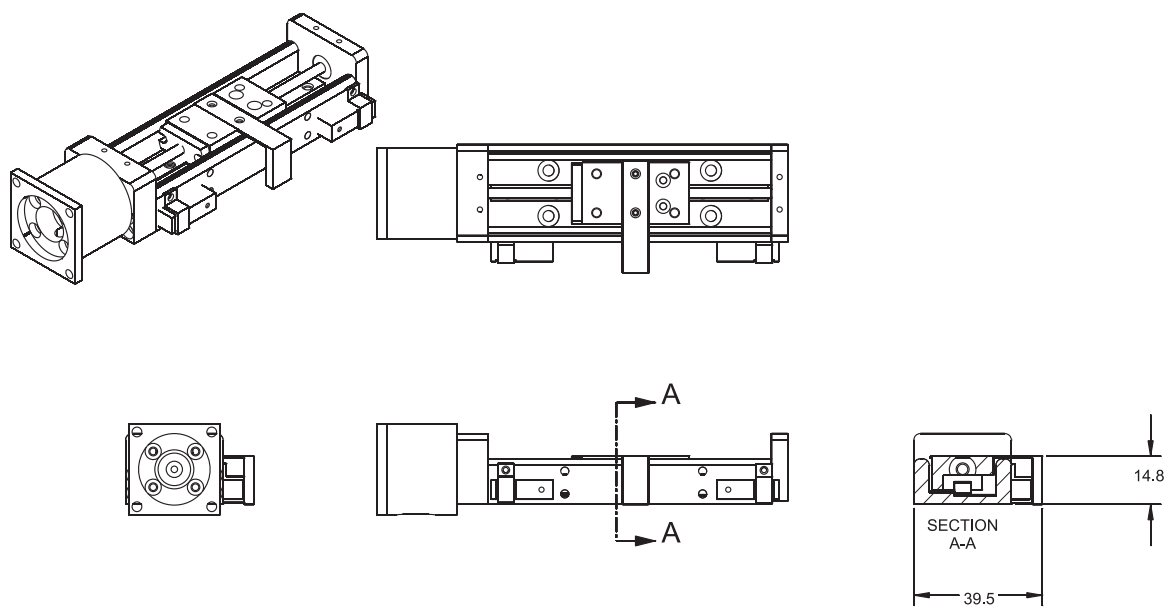


Motor Options

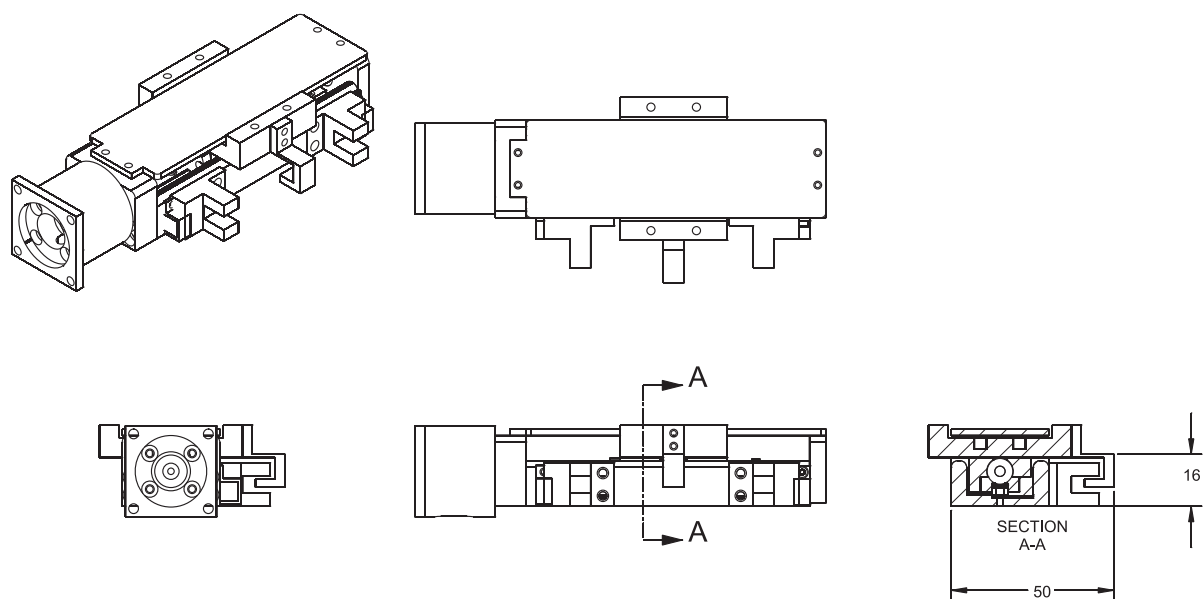
Travel	STEPPER MOTOR (ST)										SERVO MOTOR (SV)						
	OAL	L	N	A	B	C	D	E	F		OAL	A	B	C	D	E	F
25	101.2	62	2								102.2						
50	126.2	87	3	24.7	28	23	3.2	22	3 THRU		127.2	25.6	25	19.8	1.7	20	3.5 THRU
75	151.2	112	4								152.2						
100	176.2	137	5								177.2						

TA 15 (continued)

TA 15 With PX Proximity Sensors

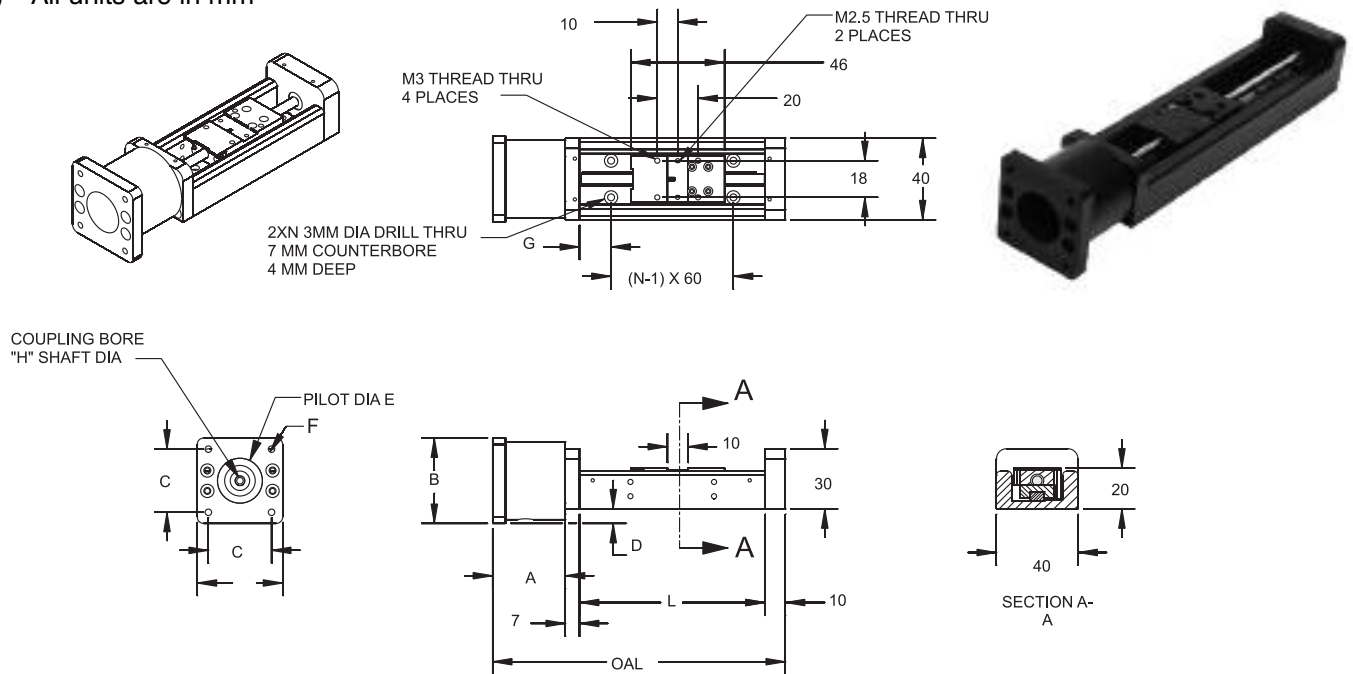


TA 15 With PH Photo Sensors

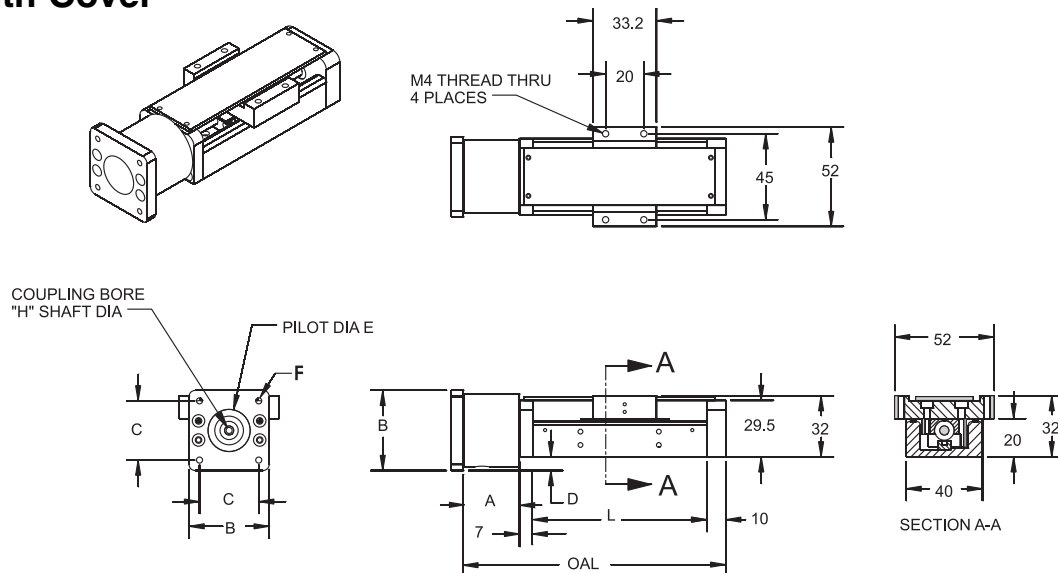


TA 20

TA 20 All units are in mm



TA 20 With Cover



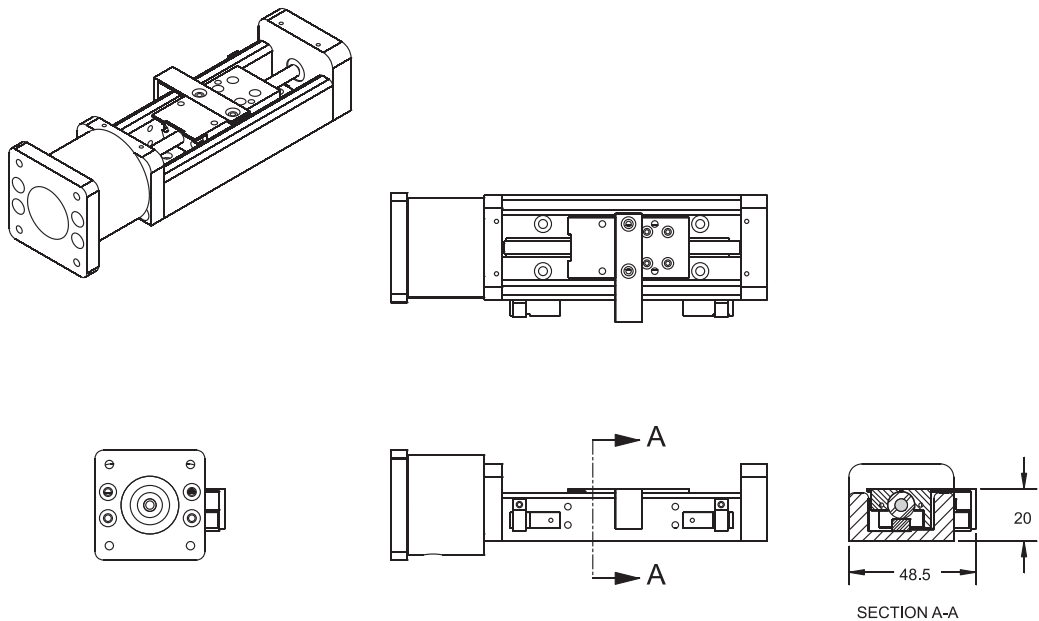
Motor Options

STEPPER MOTOR											
Travel	OAL	L	N	G	A	B	C	D	E	F	H
45	143.7	91	2	15.5							
95	193.7	141	3	10.5	35.7	42	31	7.1	22	3.2 THRU	5
145	243.7	191	3	35.5							

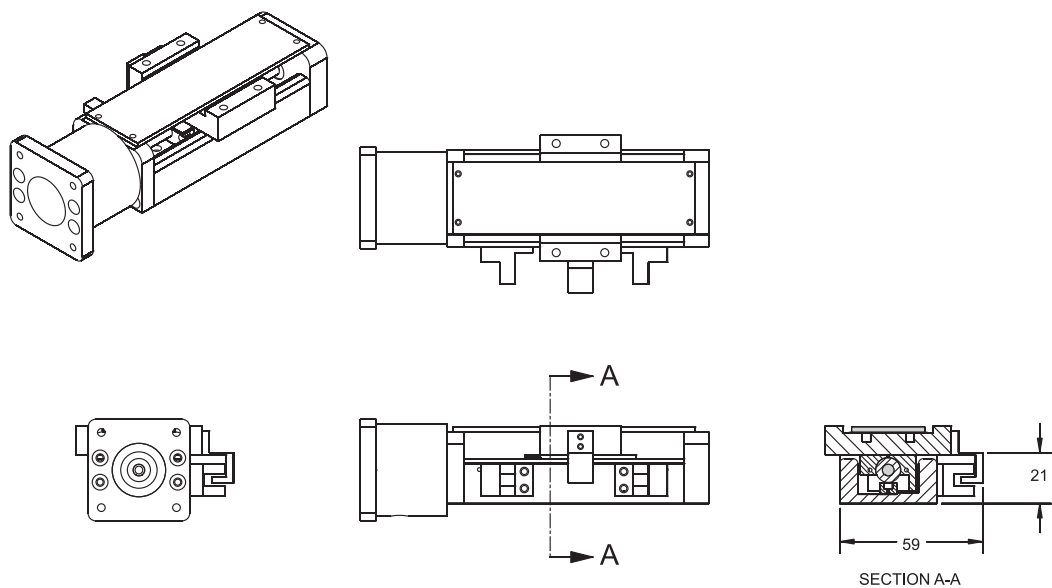
SERVO MOTOR											
Travel	OAL	L	N	G	A	B	C	D	E	F	H
45	148.8	91	2	15.5							
95	198.8	141	3	10.5	40.8	42	32.5	7.1	30	M4 THREAD	6
145	248.8	191	3	35.5							

TA 20 (continued)

TA 20 With PX Proximity Sensors

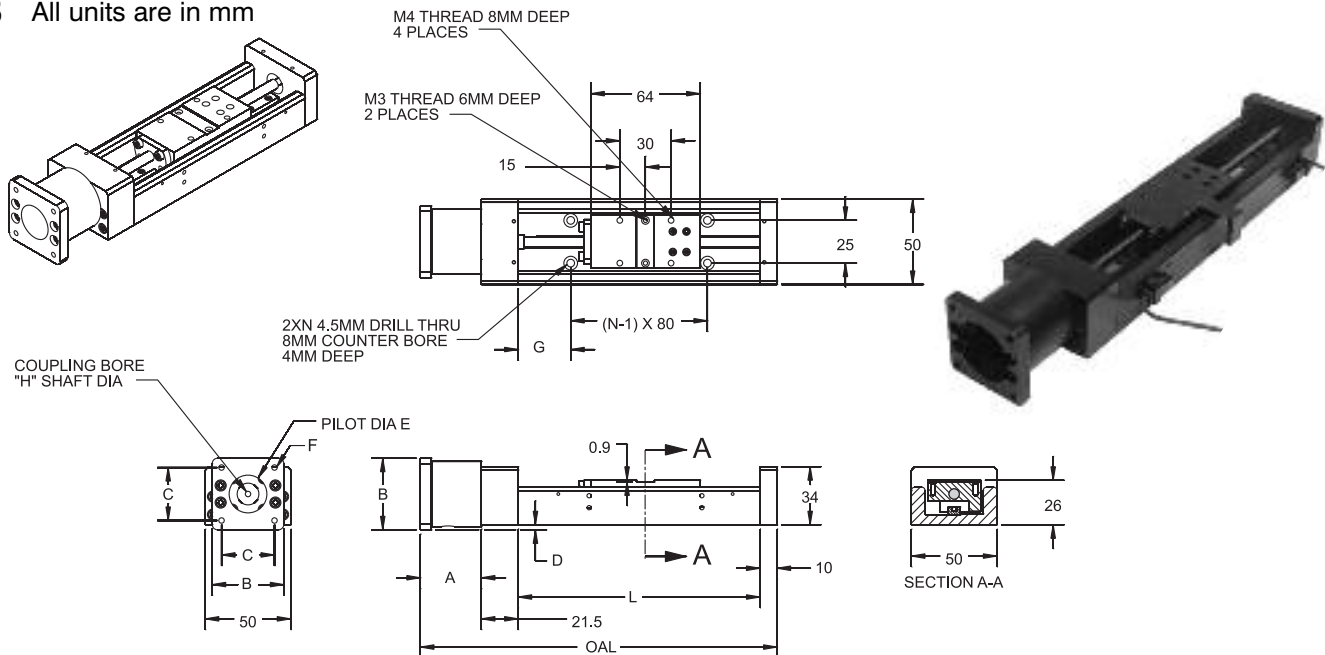


TA 20 With PH Photo Sensors

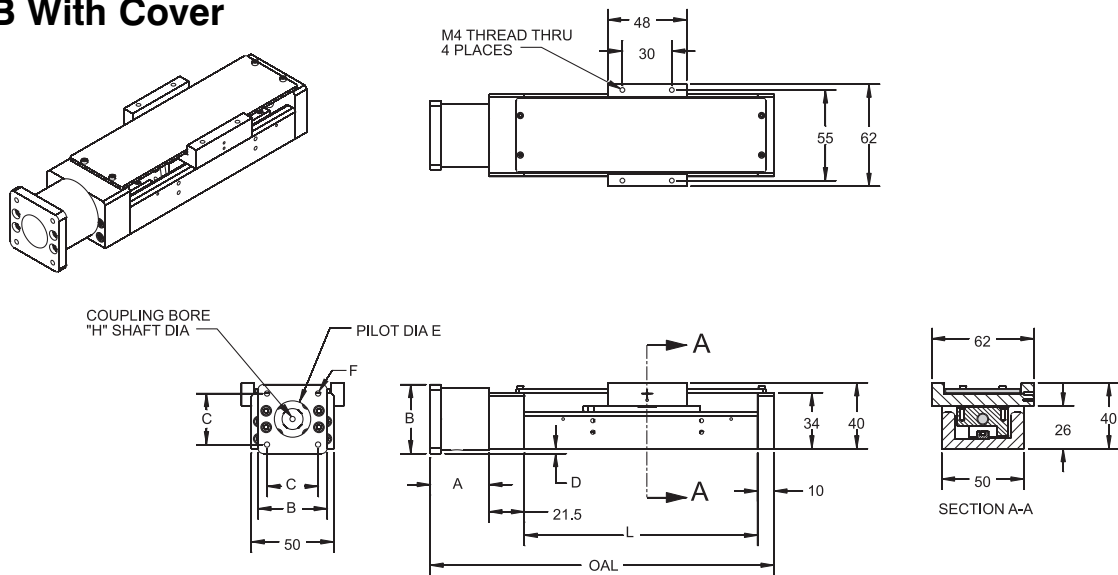


TA 26B

TA 26B All units are in mm



TA 26B With Cover



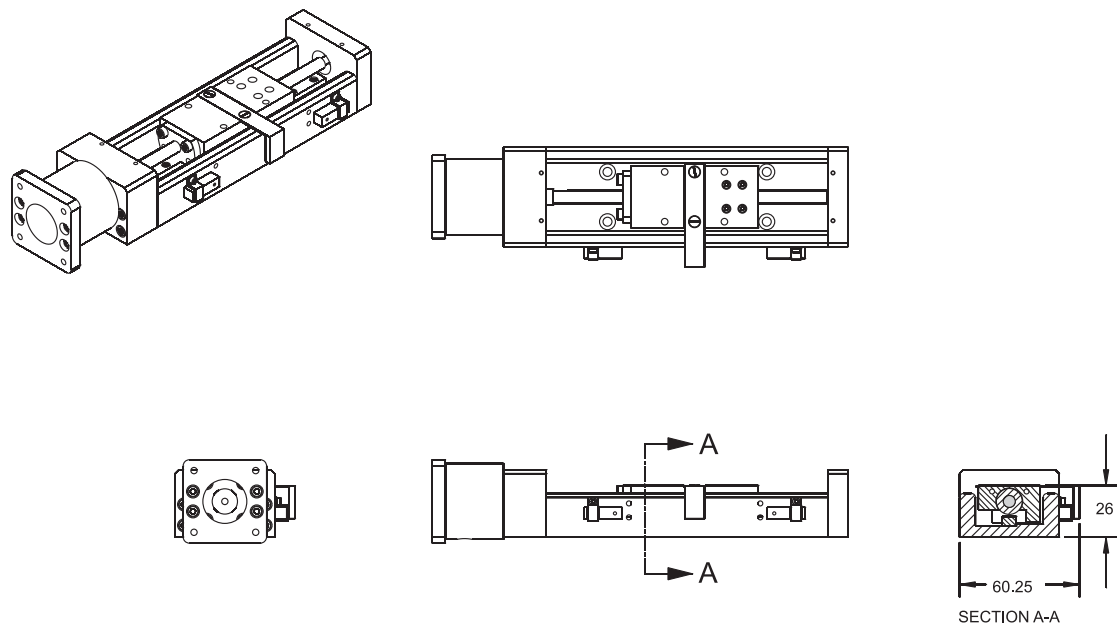
Motor Options

STEPPER MOTOR											
Travel	OAL	L	N	G	A	B	C	D	E	F	H
70	208.7	141.5	2	30.75							
120	258.7	191.5	3	15.75	35.7	42	31	3	22	3.2 THRU	5
170	308.7	241.5	3	40.75							
220	358.7	291.5	4	25.75							

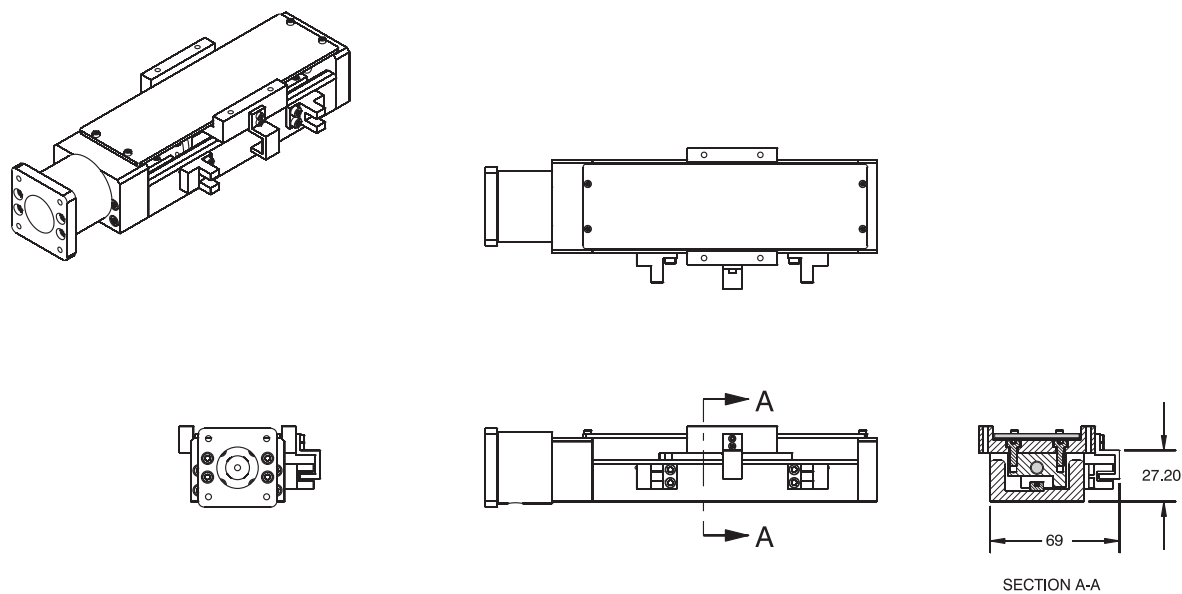
SERVO MOTOR											
Travel	OAL	L	N	G	A	B	C	D	E	F	H
70	213.8	141.5	2	30.75							
120	263.8	191.5	3	15.75	40.8	42	32.5	3	30	M4 THREAD	6
170	313.8	241.5	3	40.75							
220	363.8	291.5	4	25.75							

TA 26B (continued)

TA 26B With PX Proximity Sensors



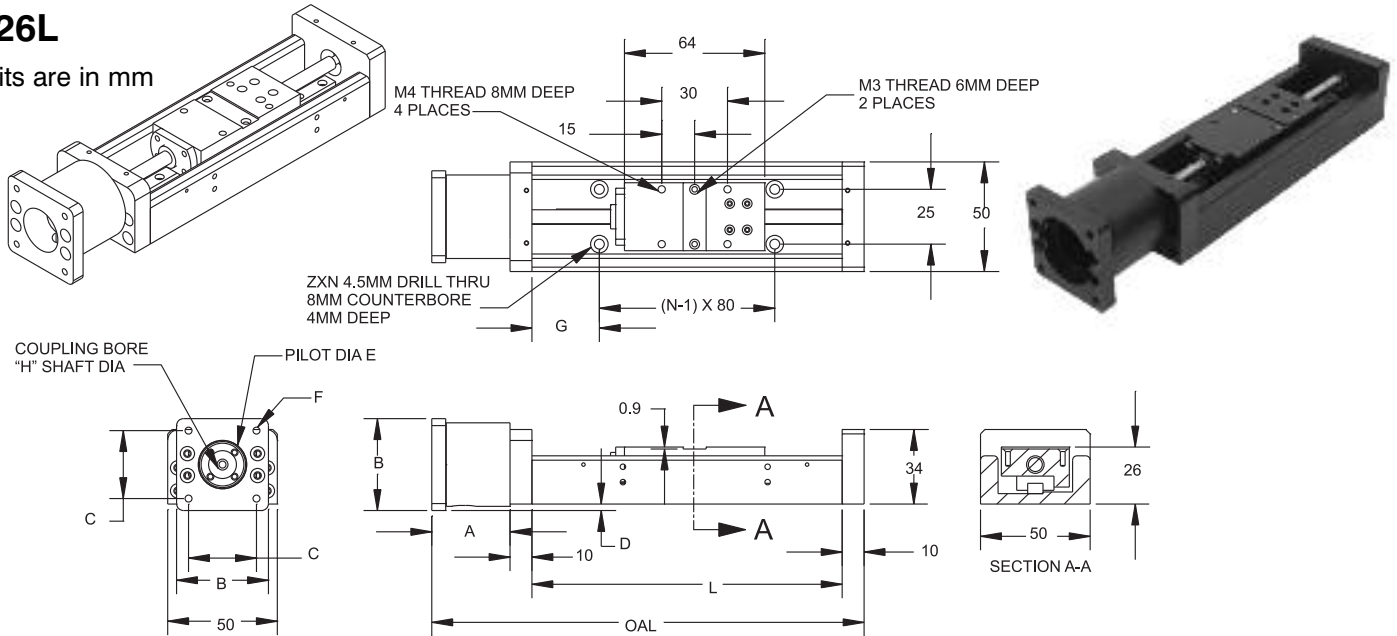
TA 26B With PH Photo Sensors



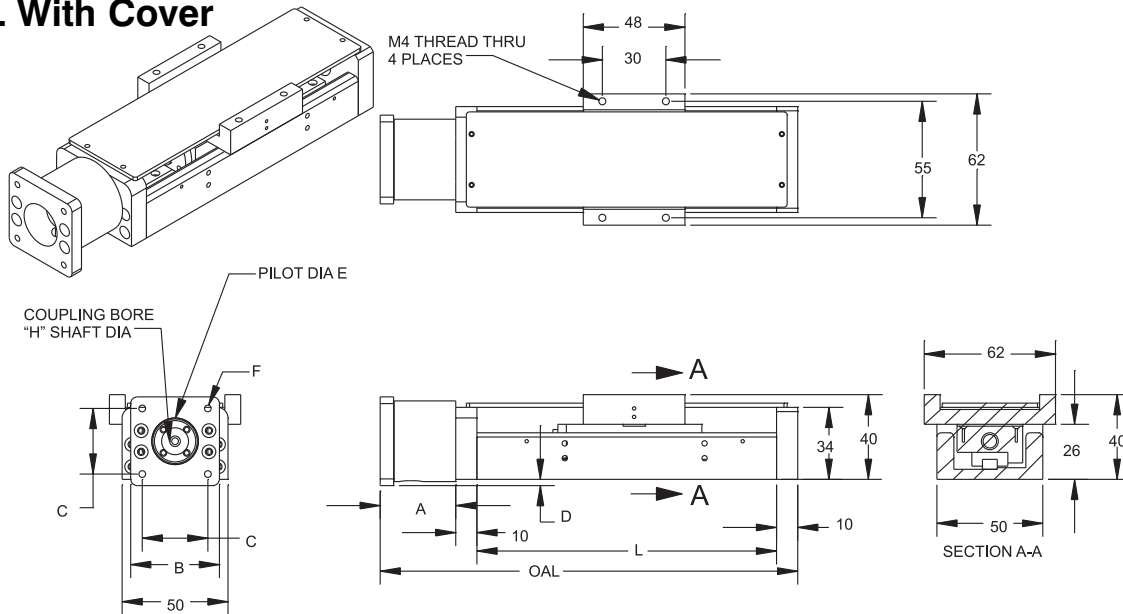
TA 26L

TA 26L

All units are in mm



TA 26L With Cover



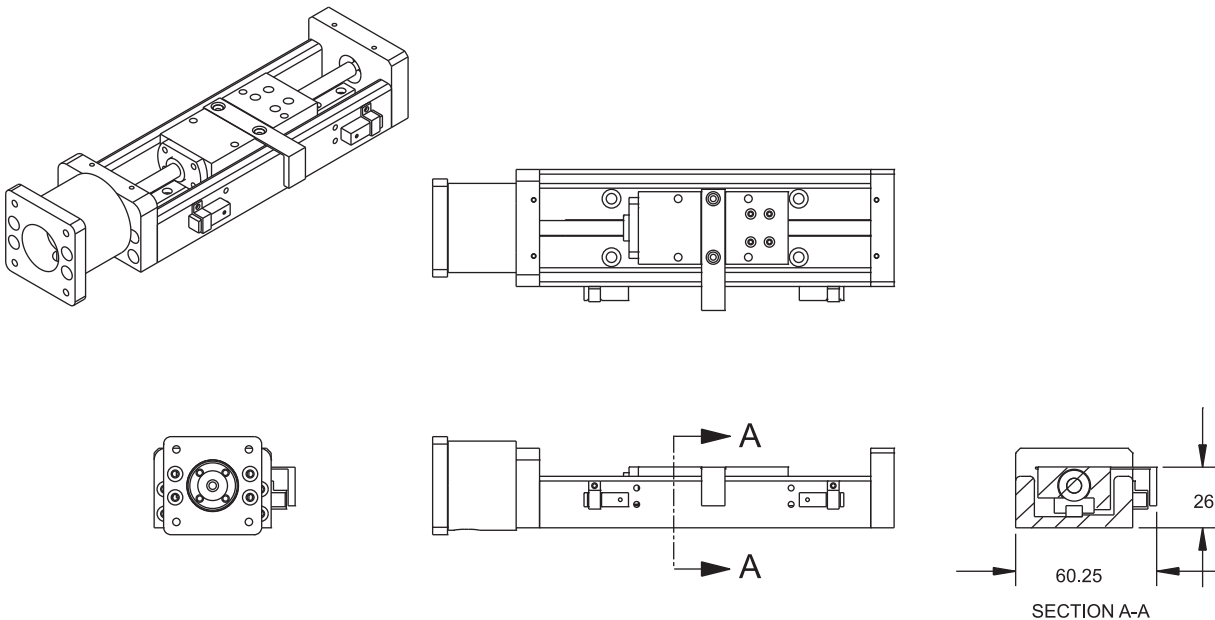
Motor Options

STEPPER MOTOR											
Travel	OAL	L	N	G	A	B	C	D	E	F	H
70	197.2	141.5	2	30.75							
120	247.2	191.5	3	15.75	35.7	42	31	3	22	3.2 THRU	5
170	297.2	241.5	3	40.75							
220	347.2	291.5	4	25.75							

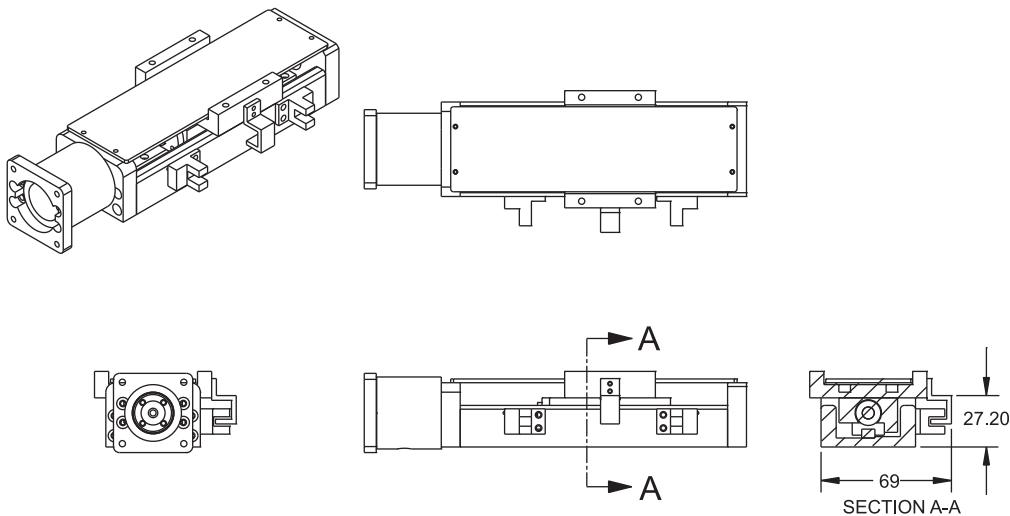
SERVO MOTOR											
Travel	OAL	L	N	G	A	B	C	D	E	F	H
70	202.3	141.5	2	30.75							
120	252.3	191.5	3	15.75	40.8	42	32.5	3	22	M4 THREAD	6
170	302.3	241.5	3	40.75							
220	352.3	291.5	4	25.75							

TA 26L (continued)

TA 26L With PX Proximity Sensors



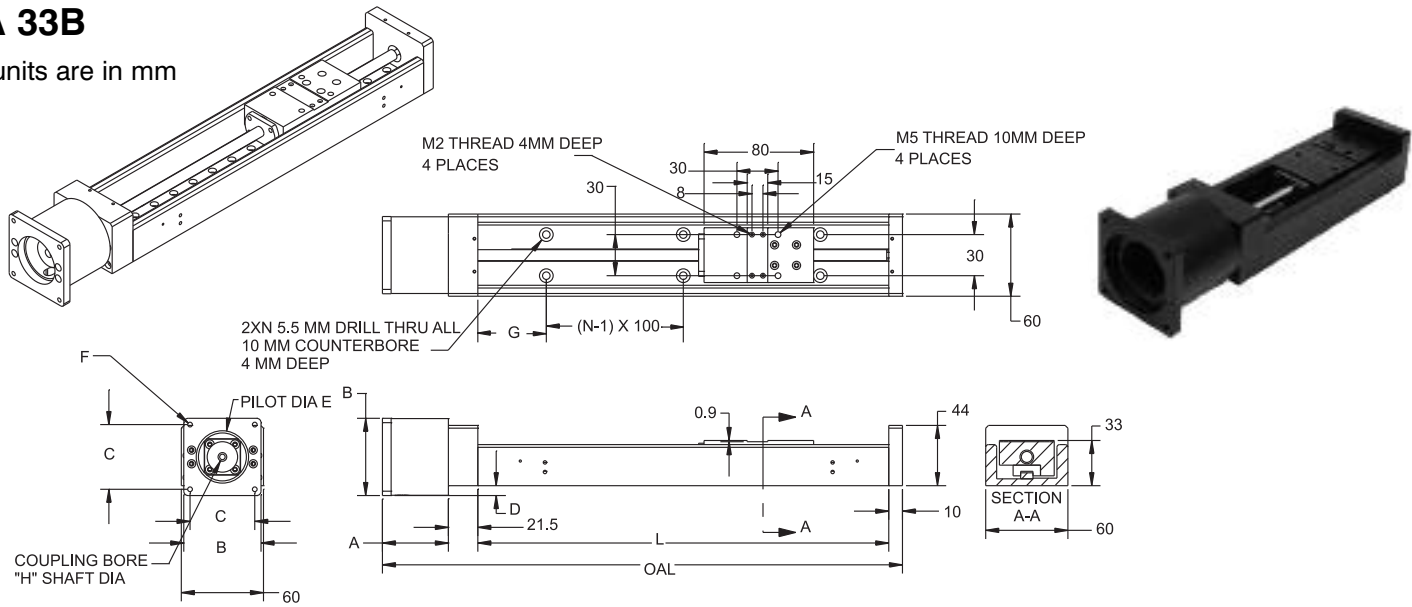
TA 26L With PH Photo Sensors



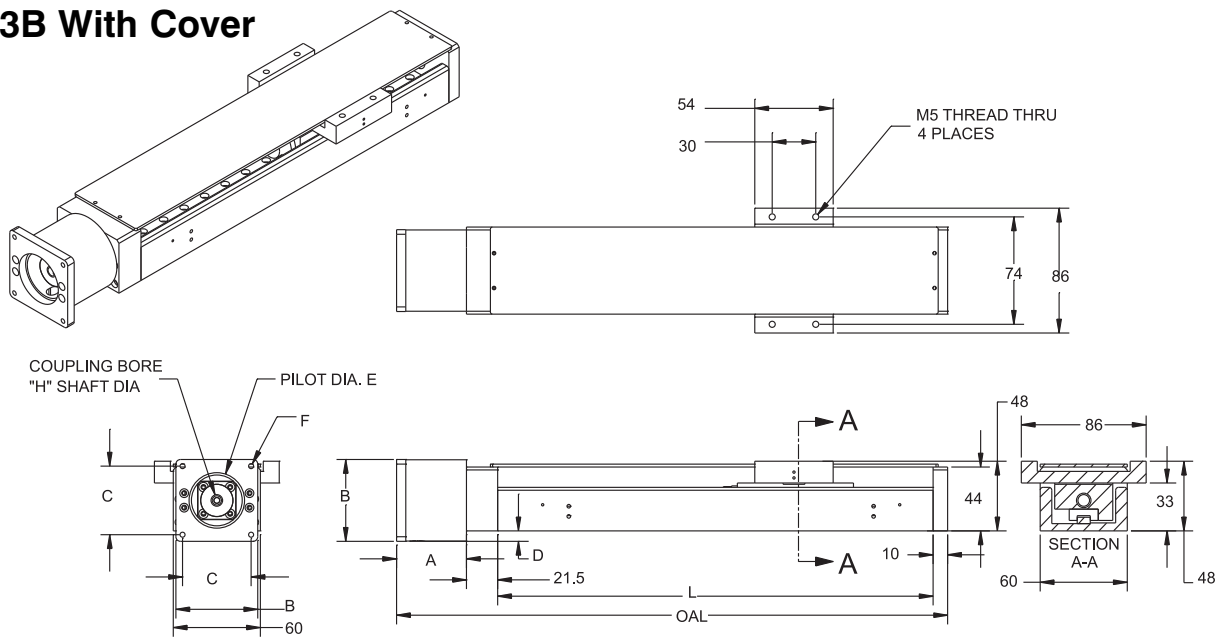
TA 33B

TA 33B

All units are in mm



TA 33B With Cover



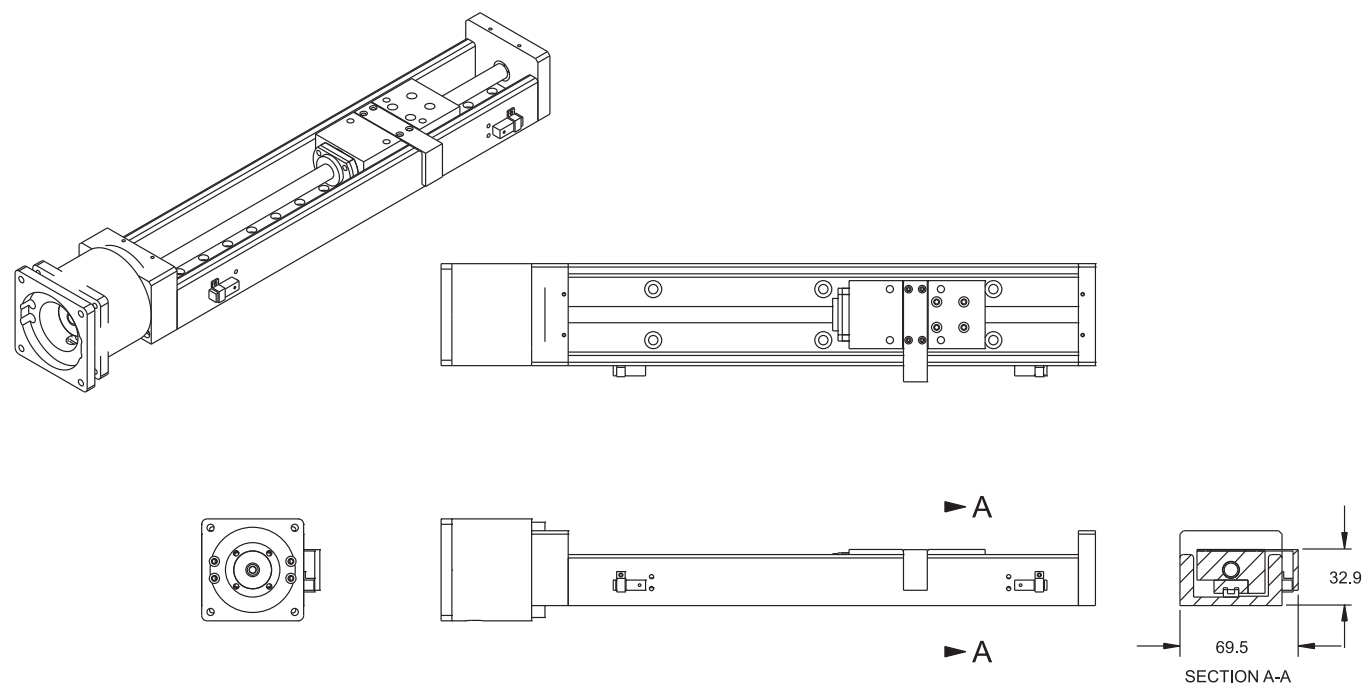
Motor Options

Travel	OAL	L	N	G	STEPPER MOTOR		C	D	E	F	H
					A	B					
60	229.6	150	2	25							
110	279.6	200	2	50	48.1	56.4	47.2	7.2	38.2	8-32 THREAD	6.35(.250")
210	379.6	300	3	50							
310	479.6	400	4	50							
410	579.6	500	5	50							

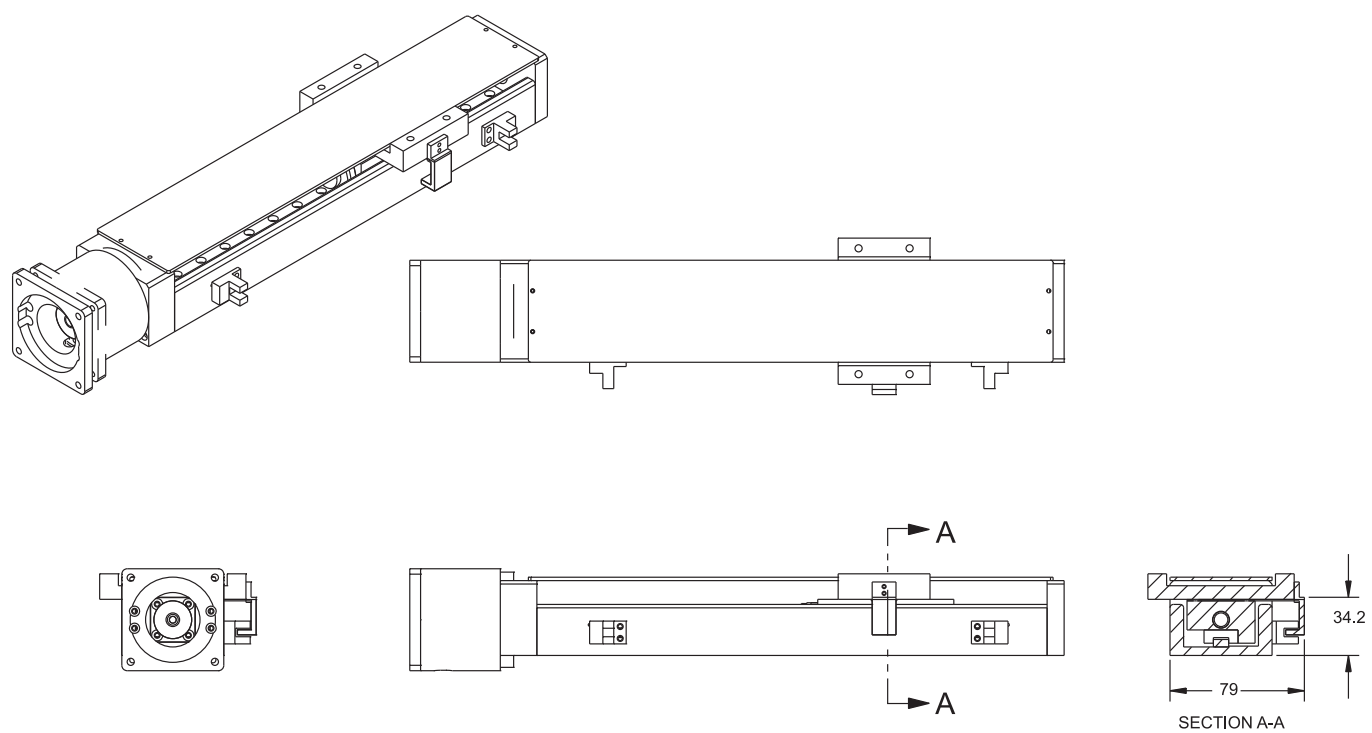
Travel	OAL	L	N	G	SERVO MOTOR		C	D	E	F	H
					A	B					
60	234.7	150	2	25							
110	284.7	200	2	50	53.2	60	49.5	8.9	50.1	M5 THREAD	8
210	384.7	300	3	50							
310	484.7	400	4	50							
410	584.7	500	5	50							

TA 33B (continued)

TA 33B With PX Proximity Sensors



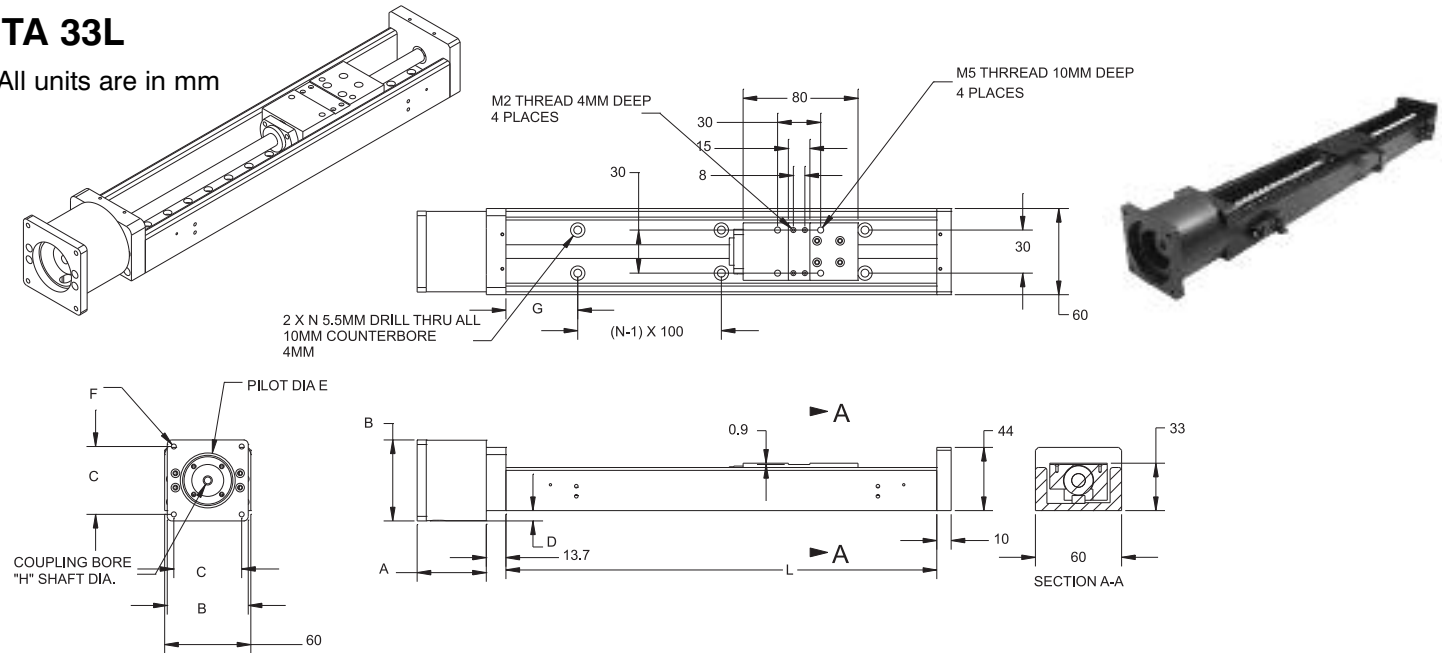
TA 33B With PH Photo Sensors



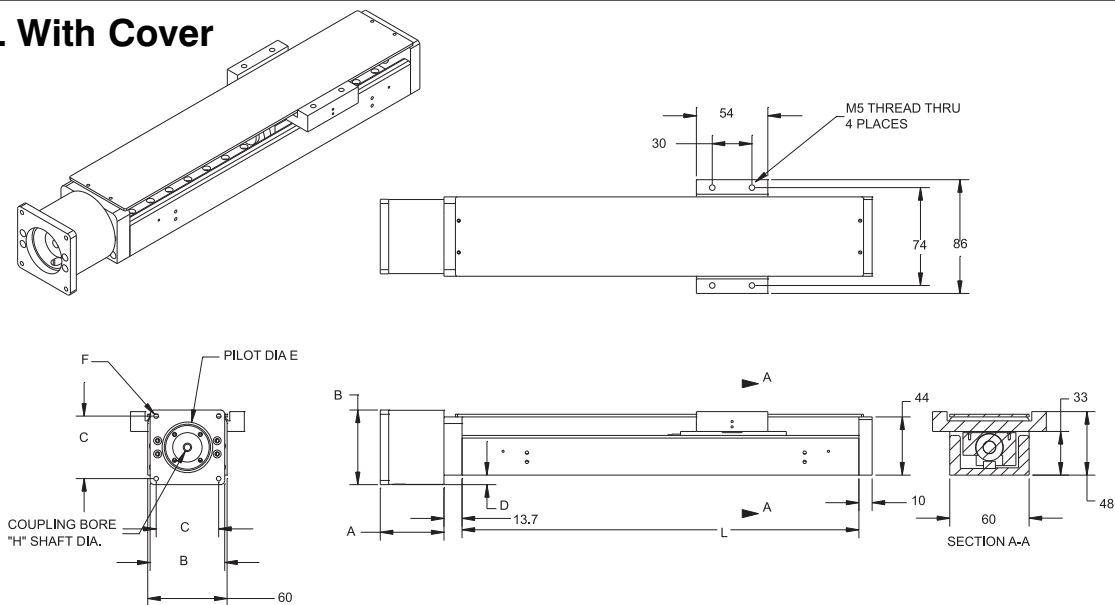
TA 33L

TA 33L

All units are in mm



TA 33L With Cover



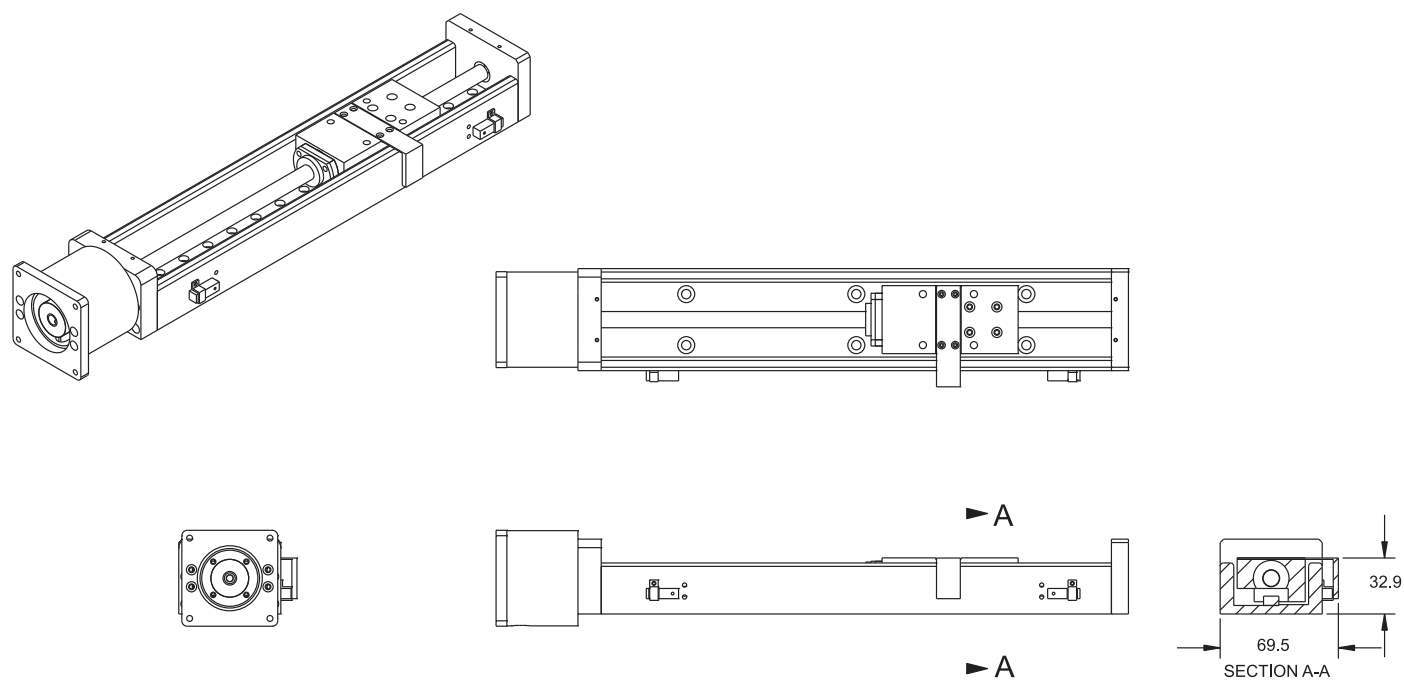
Motor Options

Travel	OAL	L	N	G	STEPPER MOTOR						
					A	B	C	D	E	F	H
60	221.8	150	2	25							
110	271.8	200	2	50	48.1	56.4	47.2	7.2	38.2	8-32 THREAD	6.35(.250")
210	371.8	300	3	50							
310	471.8	400	4	50							
410	571.8	500	5	50							

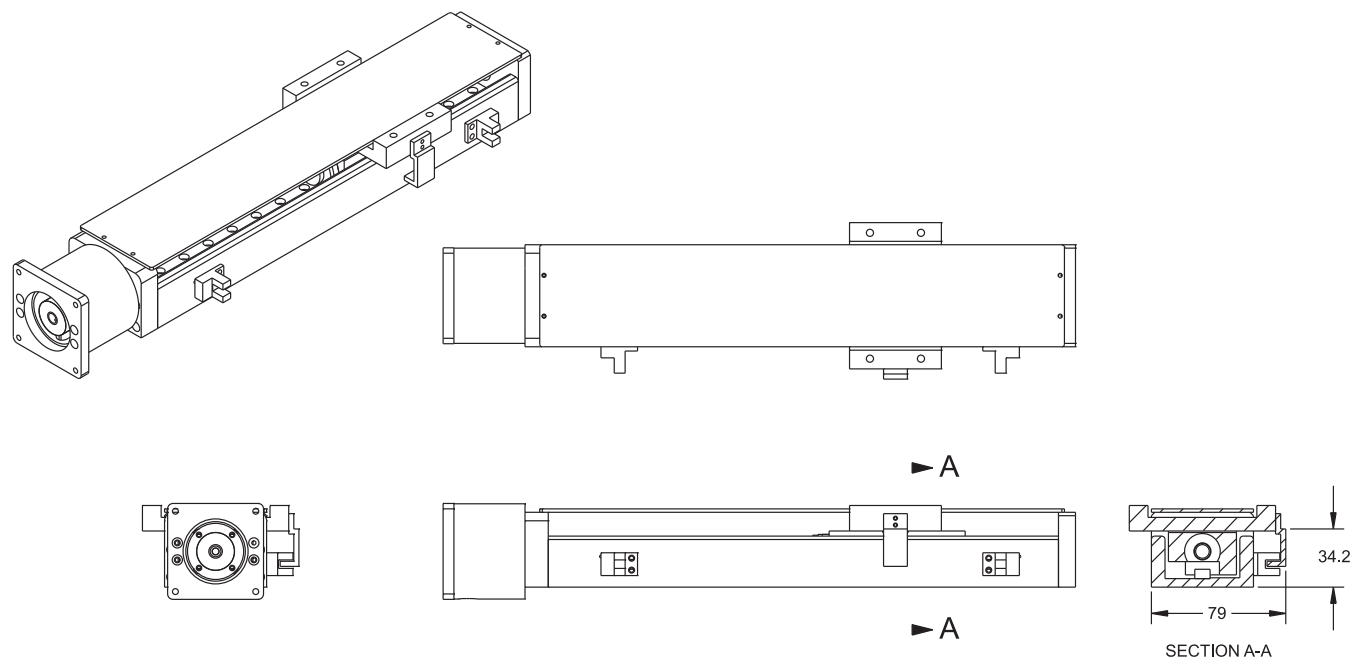
Travel	OAL	L	N	G	SERVO MOTOR						
					A	B	C	D	E	F	H
60	226.9	150	2	25							
110	276.9	200	2	50	53.2	60	49.5	8.9	50.1	M5 THREAD	8
210	376.9	300	3	50							
310	476.9	400	4	50							
410	576.9	500	5	50							

TA 33L (continued)

TA 33L With PX Proximity Sensors

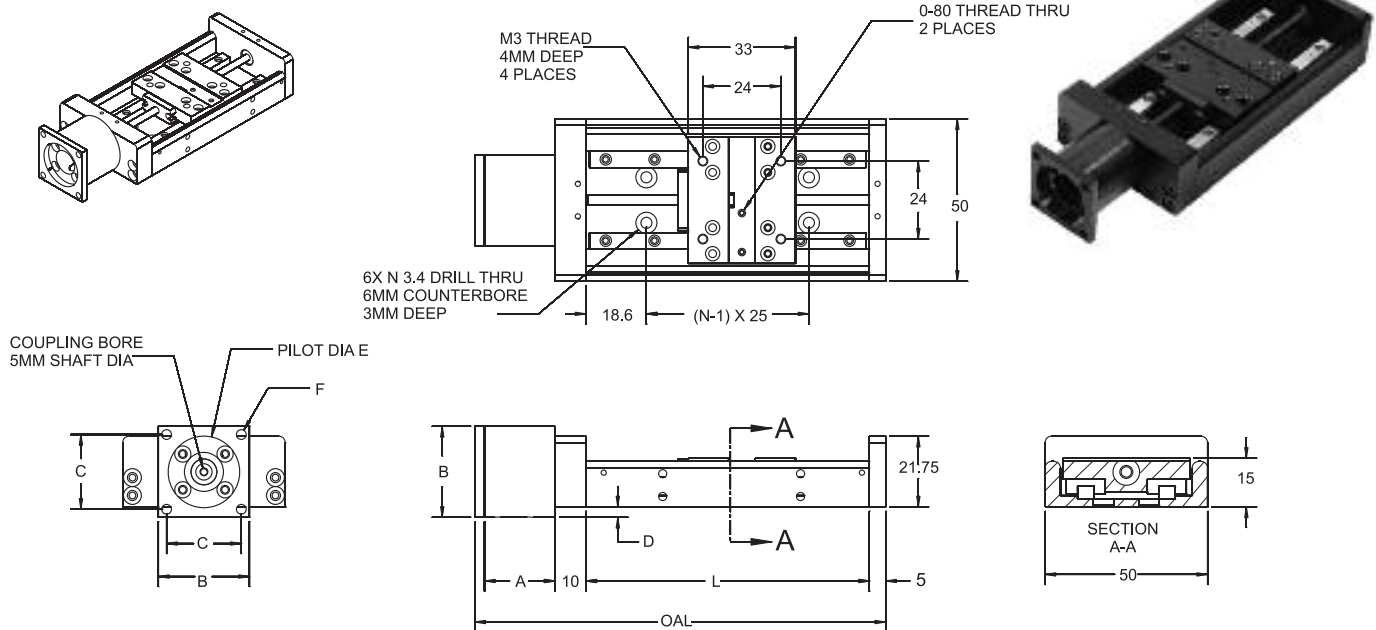


TA 33L With PH Photo Sensors

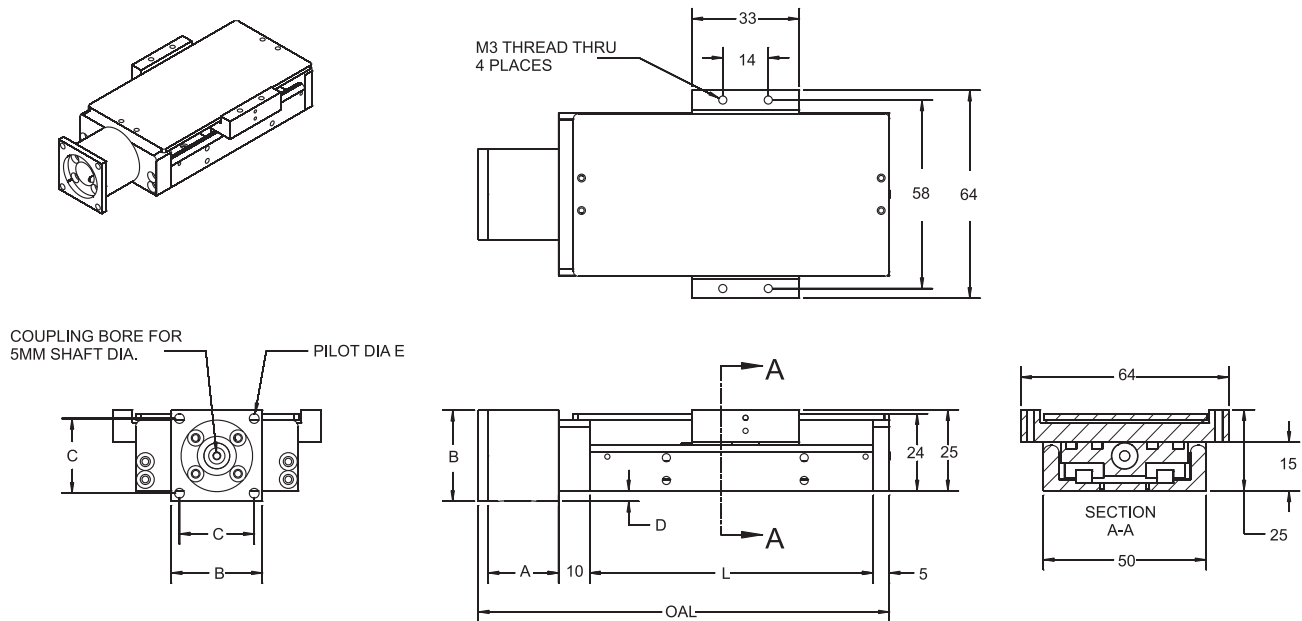


TA 15 DW

TA 15 DW All units are in mm



TA 15 DW With Cover

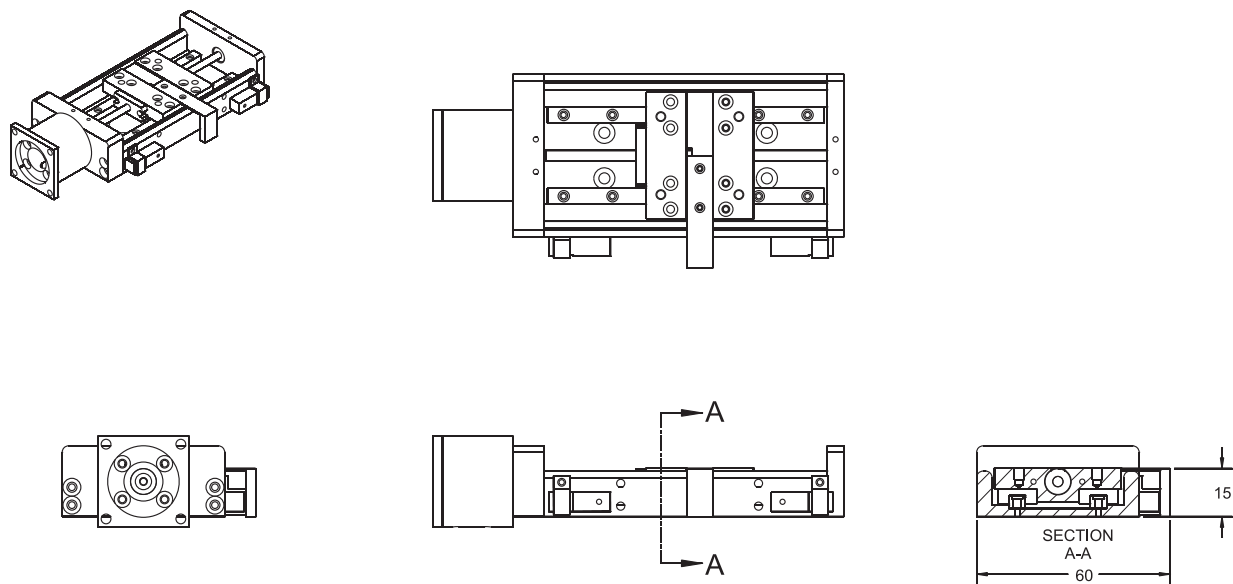


Motor Options

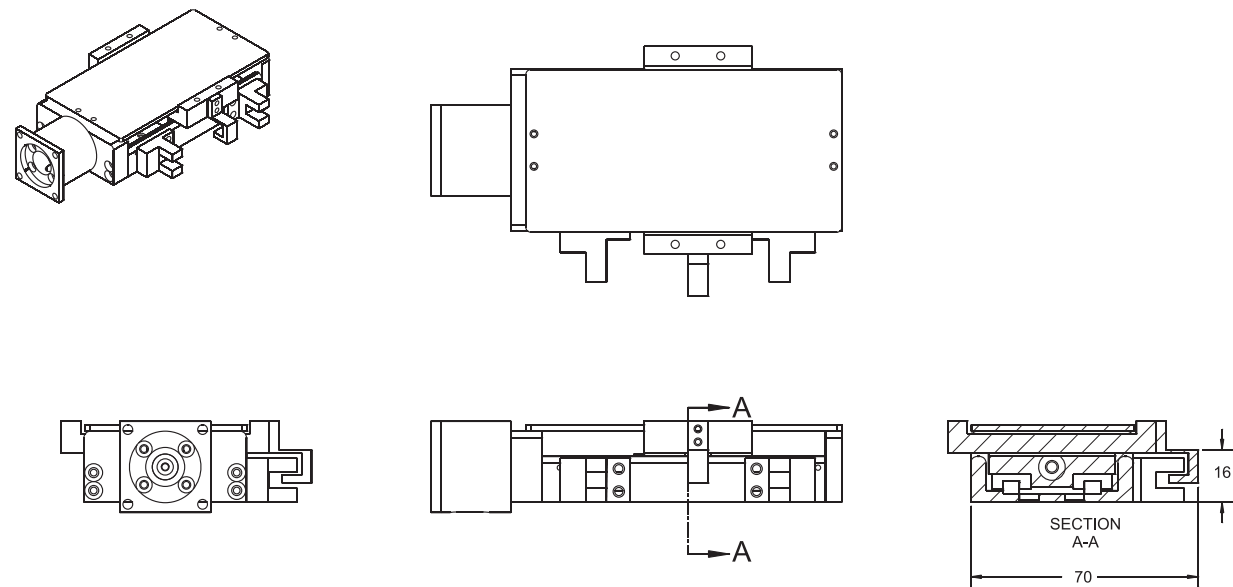
Travel	STEPPER MOTOR (ST)										SERVO MOTOR (SV)						
	OAL	L	N	A	B	C	D	E	F		OAL	A	B	C	D	E	F
25	101.2	62	2								102.2						
50	126.2	87	3	24.7	28	23	3.2	22	3 THRU		127.2	25.6	25	19.8	1.7	20	3.5 THRU
75	151.2	112	4								152.2						
100	176.2	137	5								177.2						

TA 15 DW (continued)

TA 15 DW With PX Proximity Sensors

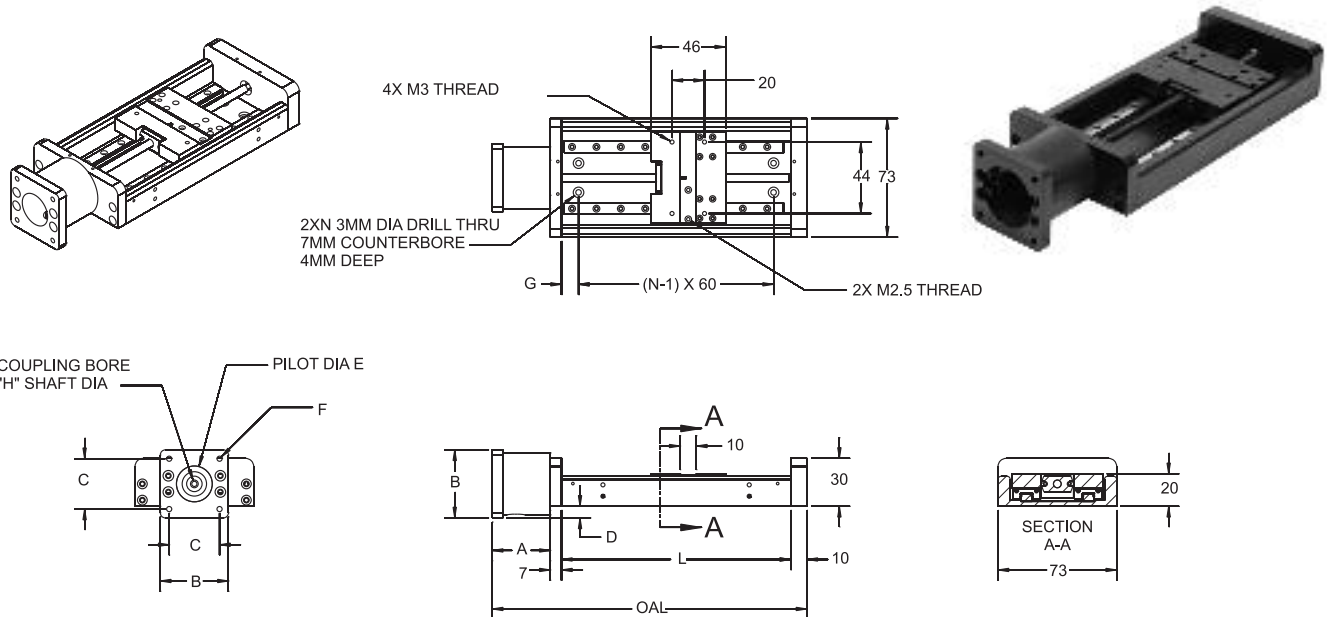


TA 15 DW With PH Photo Sensors

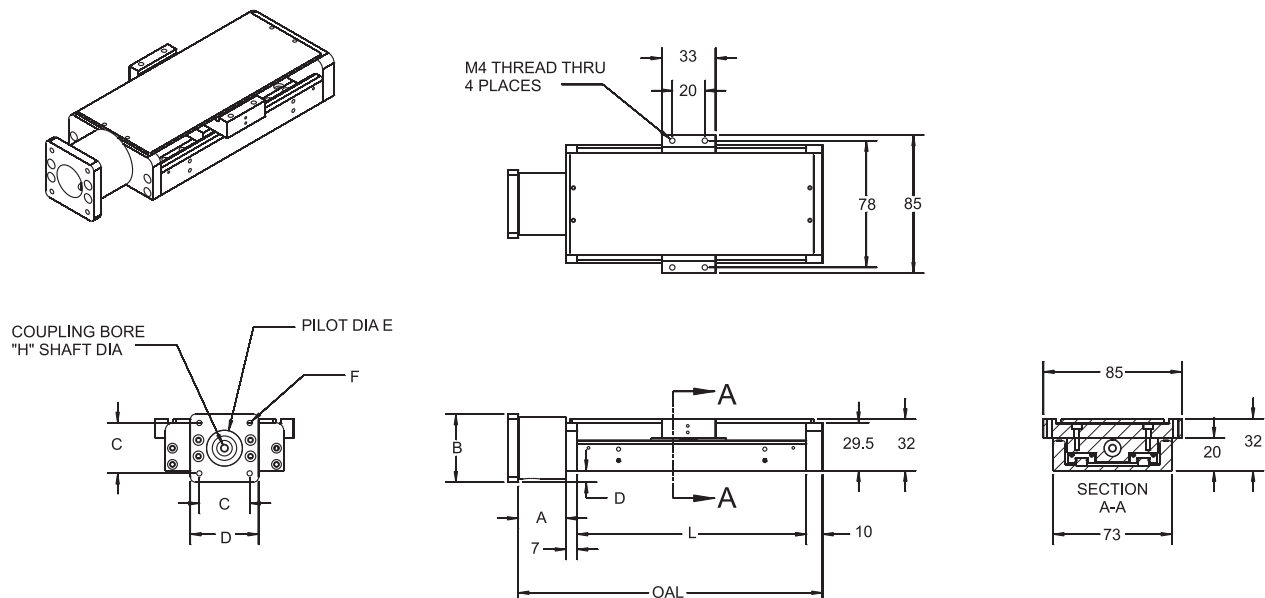


TA 20 DW

TA 20 DW All units are in mm



TA 20 DW With Cover



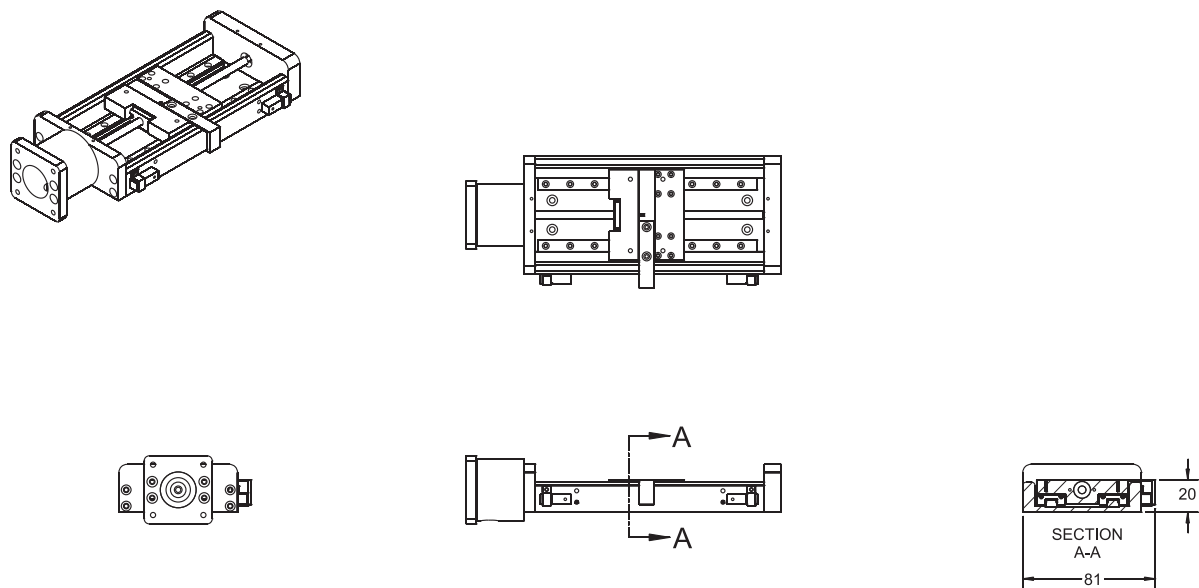
Motor Options

STEPPER MOTOR											
Travel	OAL	L	N	G	A	B	C	D	E	F	H
45	143.7	91	2	15.5							
95	193.7	141	3	10.5	35.7	42	31	7.1	22	3.2 THRU	5
145	243.7	191	3	35.5							

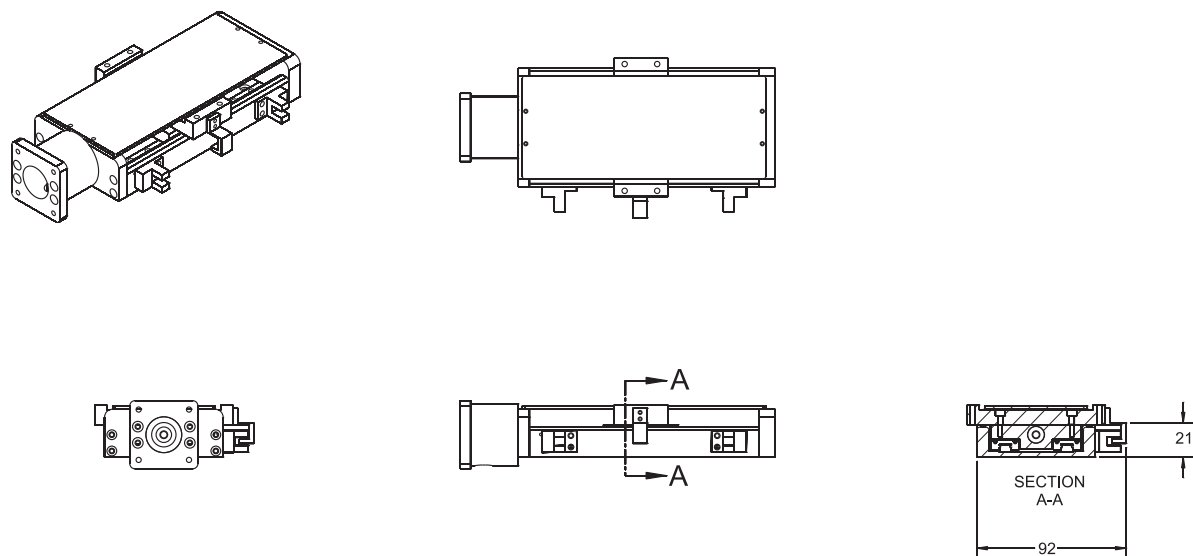
SERVO MOTOR											
Travel	OAL	L	N	G	A	B	C	D	E	F	H
45	148.8	91	2	15.5							
95	198.8	141	3	10.5	40.8	42	32.5	7.1	30	M4 THREAD	6
145	248.8	191	3	35.5							

TA 20 DW (continued)

TA 20 DW With PX Proximity Sensors

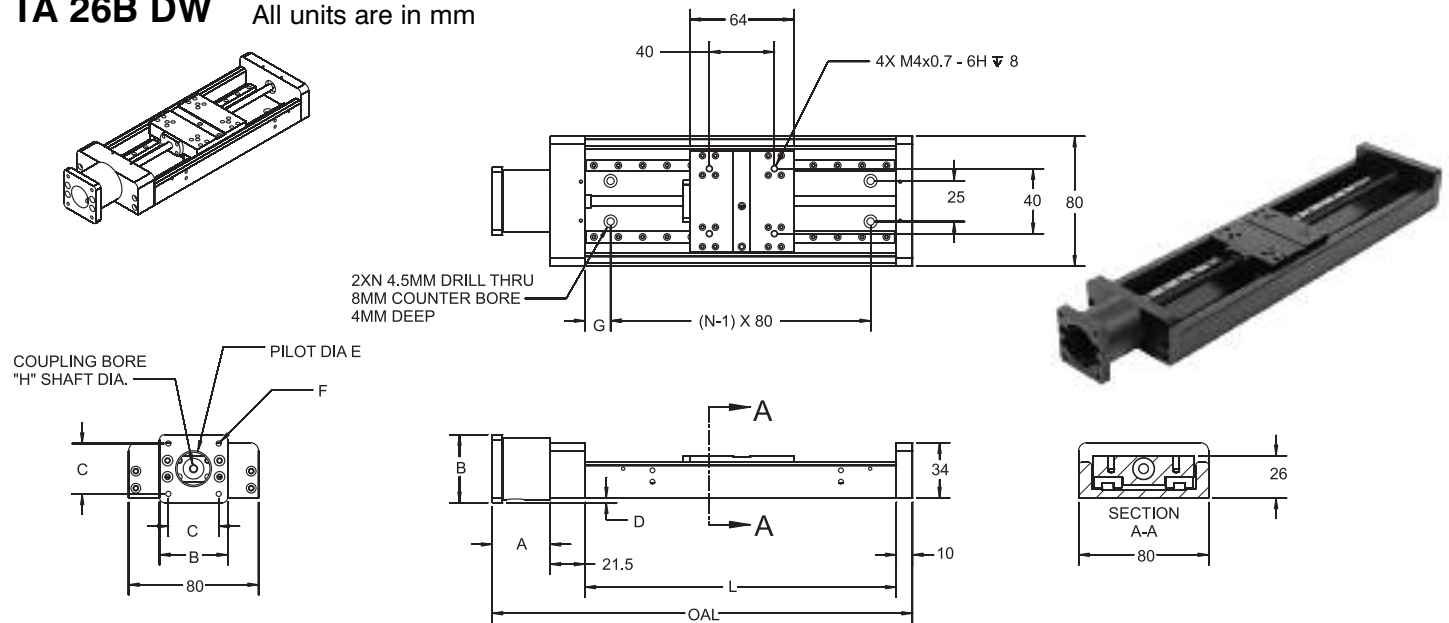


TA 20 DW With PH Photo Sensors

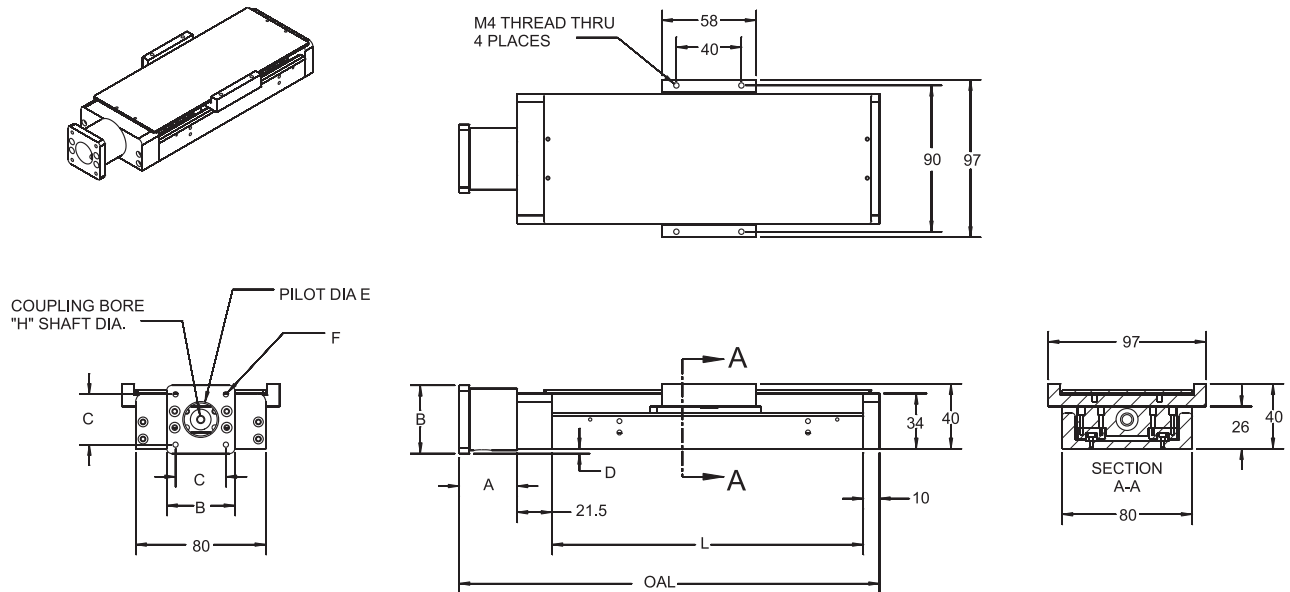


TA 26B DW

TA 26B DW All units are in mm



TA 26B DW With Cover



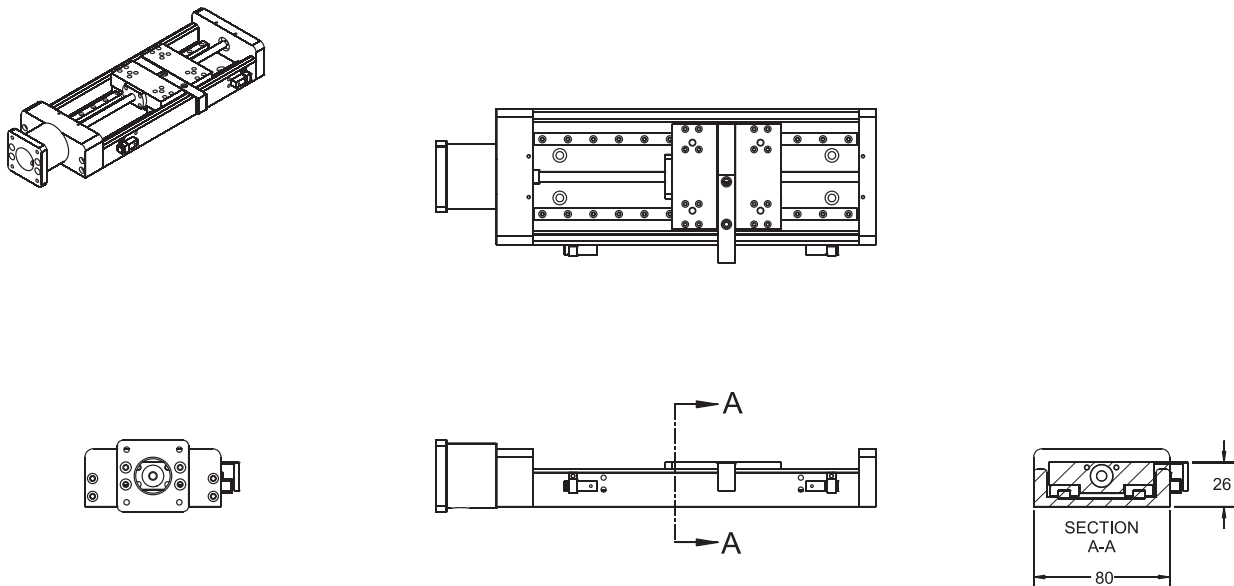
Motor Options

STEPPER MOTOR											
Travel	OAL	L	N	G	A	B	C	D	E	F	H
70	208.7	141.5	2	30.75							
120	258.7	191.5	3	15.75	35.7	42	31	3	22	3.2 THRU	5
170	308.7	241.5	3	40.75							
220	358.7	291.5	4	25.75							

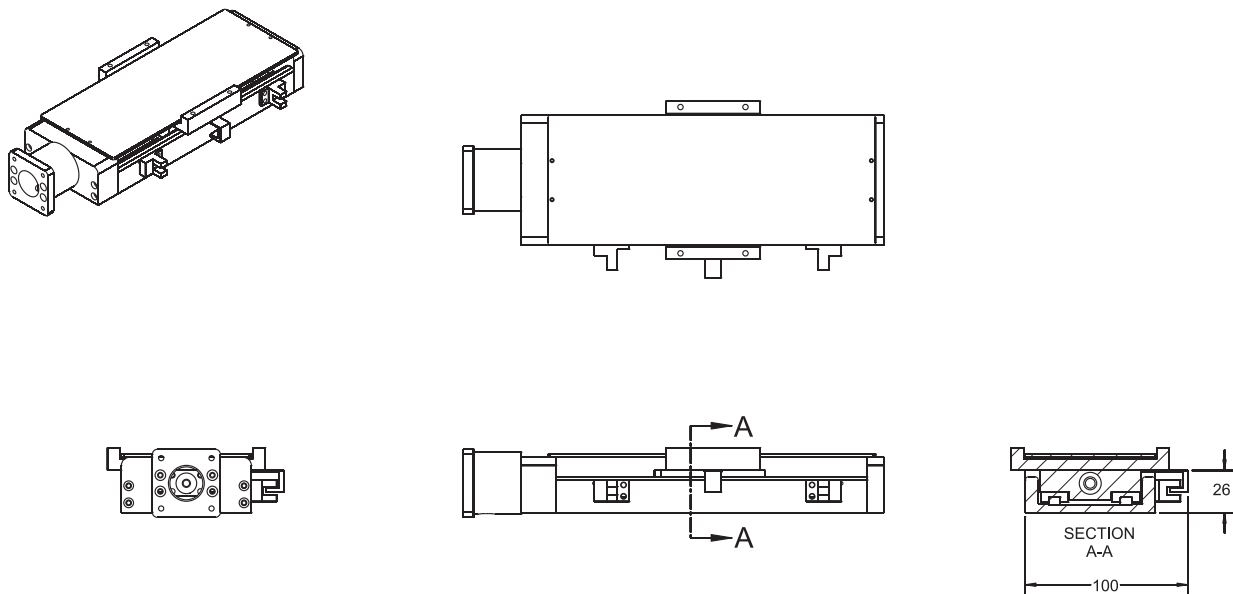
SERVO MOTOR											
Travel	OAL	L	N	G	A	B	C	D	E	F	H
70	213.8	141.5	2	30.75							
120	263.8	191.5	3	15.75	40.8	42	32.5	3	30	M4 THREAD	6
170	313.8	241.5	3	40.75							
220	363.8	291.5	4	25.75							

TA 26B DW (continued)

TA 26B DW With PX Proximity Sensors



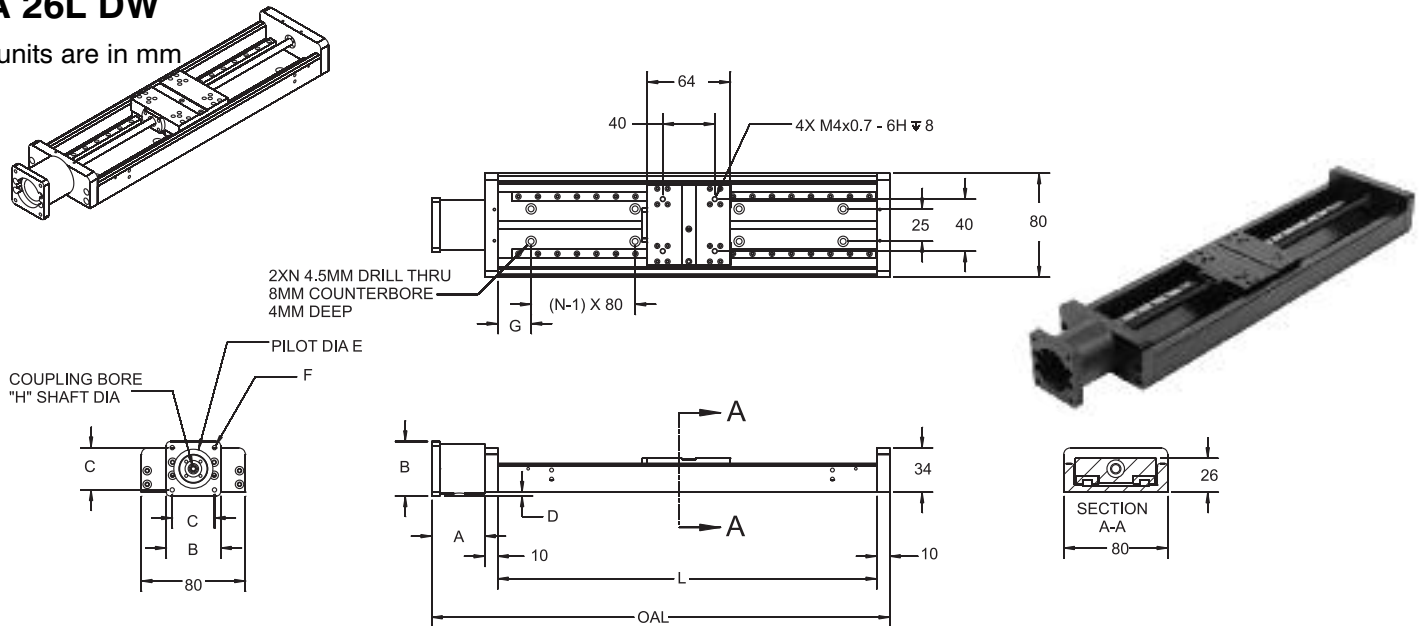
TA 26B DW With PH Photo Sensors



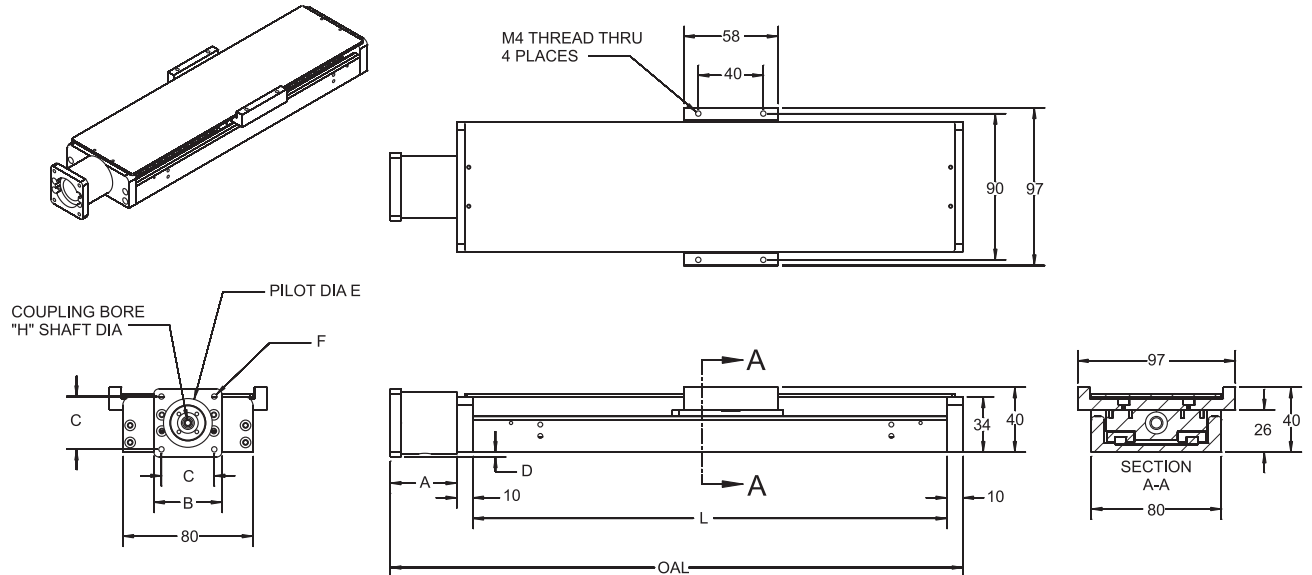
TA 26L DW

TA 26L DW

All units are in mm



TA 26L DW With Cover



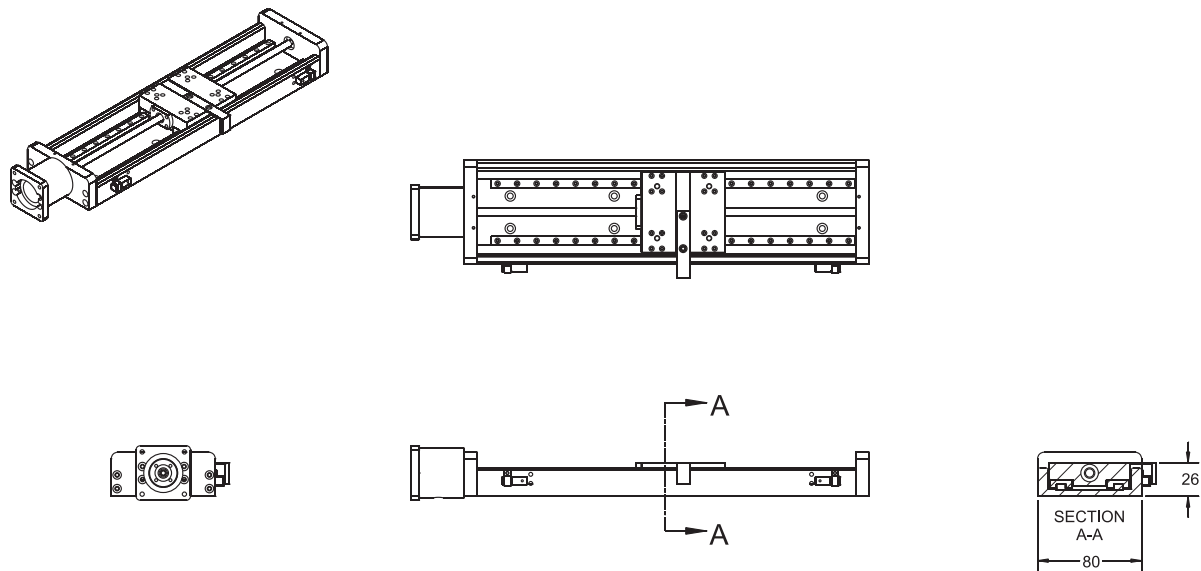
Motor Options

STEPPER MOTOR												
Travel	OAL	L	N	G	A	B	C	D	E	F	H	
70	197.2	141.5	2	30.75								
120	247.2	191.5	3	15.75	35.7	42	31	3	22	3.2 THRU	5	
170	297.2	241.5	3	40.75								
220	347.2	291.5	4	25.75								

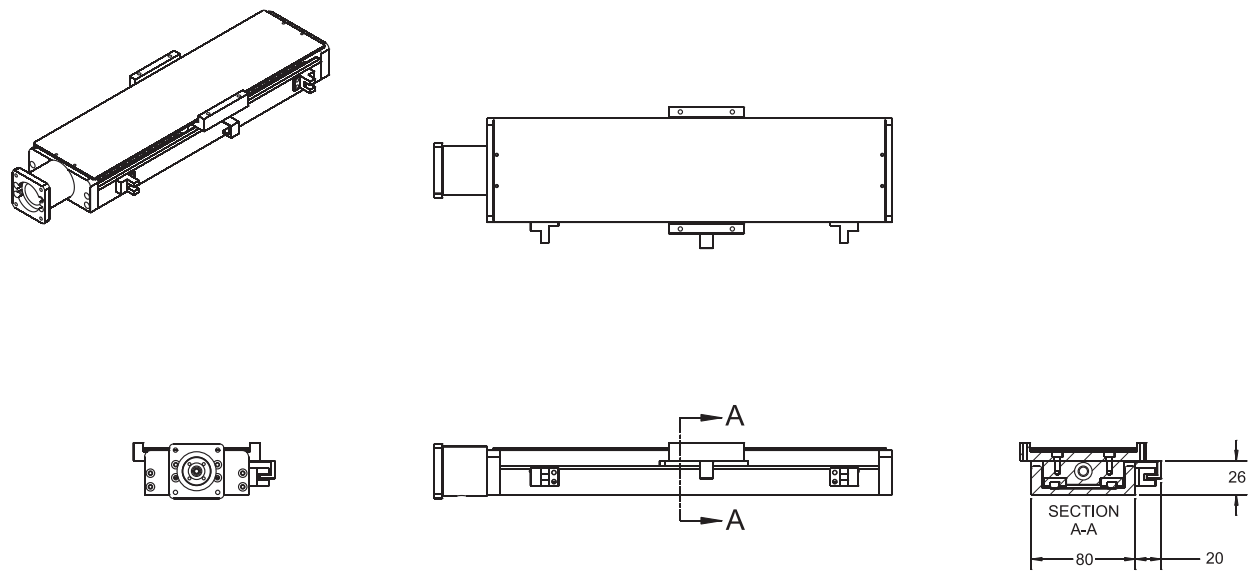
SERVO MOTOR												
Travel	OAL	L	N	G	A	B	C	D	E	F	H	
70	202.3	141.5	2	30.75								
120	252.3	191.5	3	15.75	40.8	42	32.5	3	22	M4 THREAD	6	
170	302.3	241.5	3	40.75								
220	352.3	291.5	4	25.75								

TA 26L DW (continued)

TA 26L DW With PX Proximity Sensors



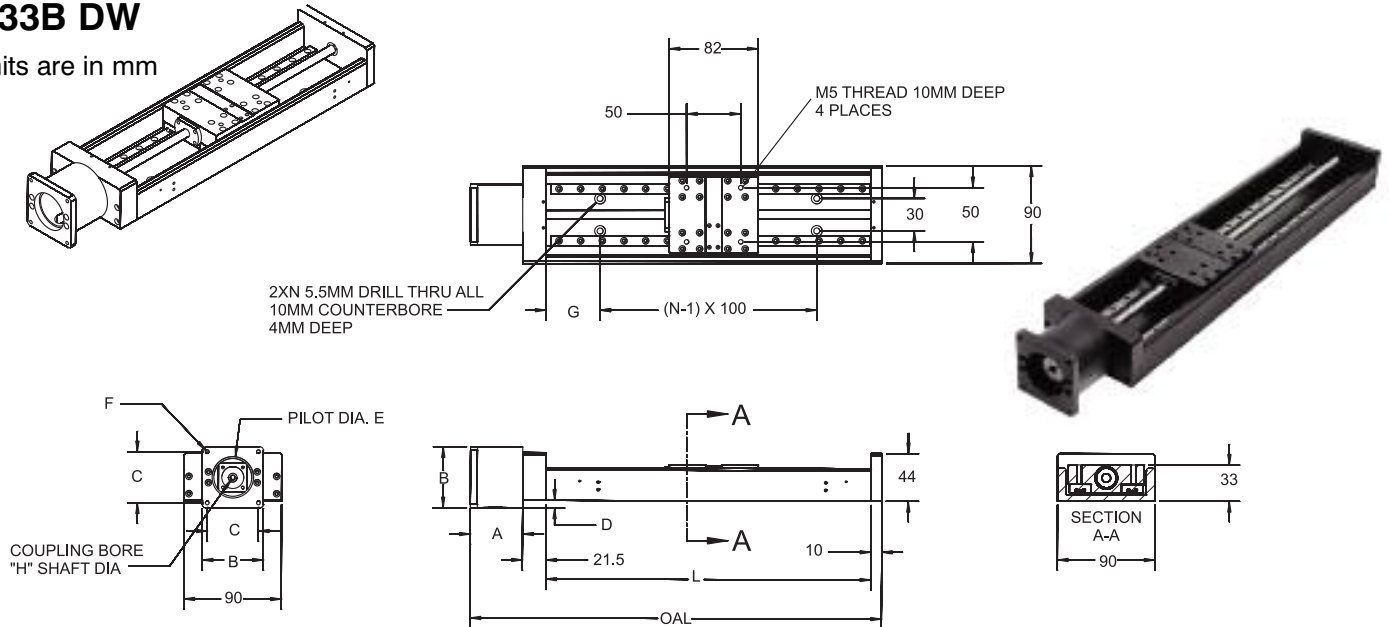
TA 26L DW With PH Photo Sensors



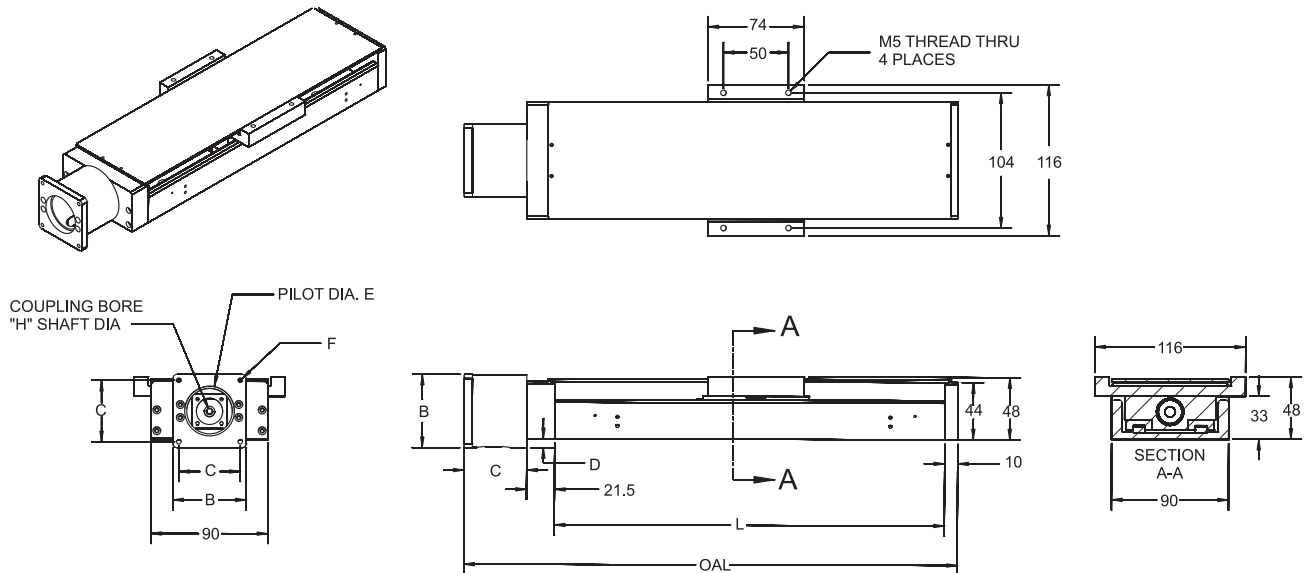
TA 33B DW

TA 33B DW

All units are in mm



TA 33B DW With Cover



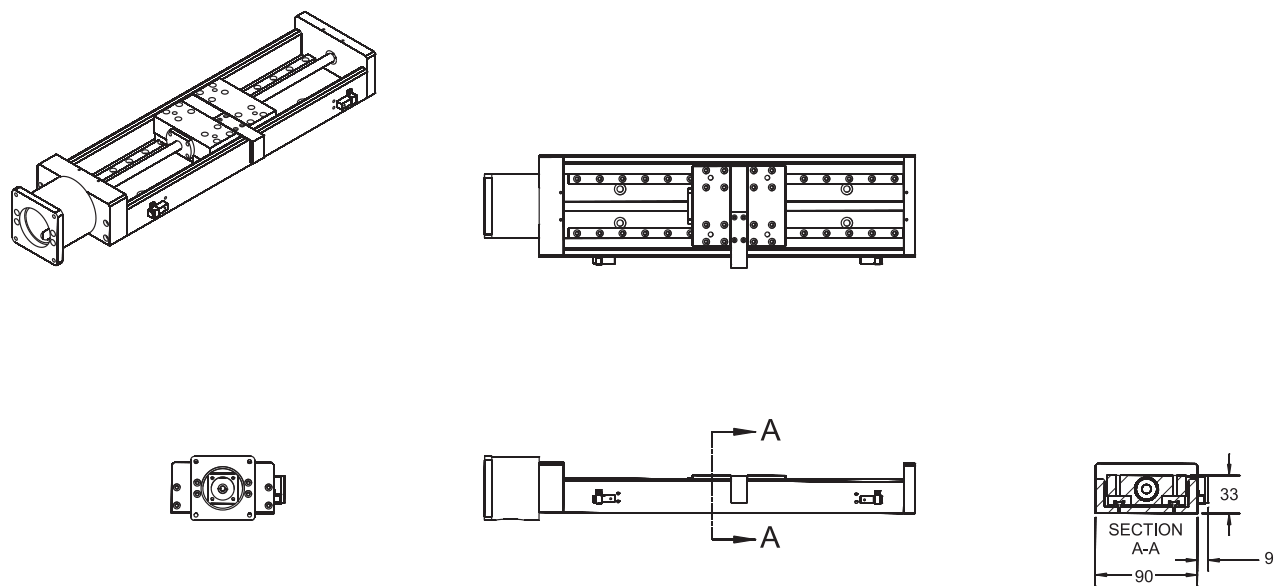
Motor Options

Travel	OAL	L	N	G	STEPPER MOTOR		C	D	E	F	H
					A	B					
60	229.6	150	2	25							
110	279.6	200	2	50	48.1	56.4	47.2	7.2	38.2	8-32 THREAD	6.35(.250")
210	379.6	300	3	50							
310	479.6	400	4	50							
410	579.6	500	5	50							

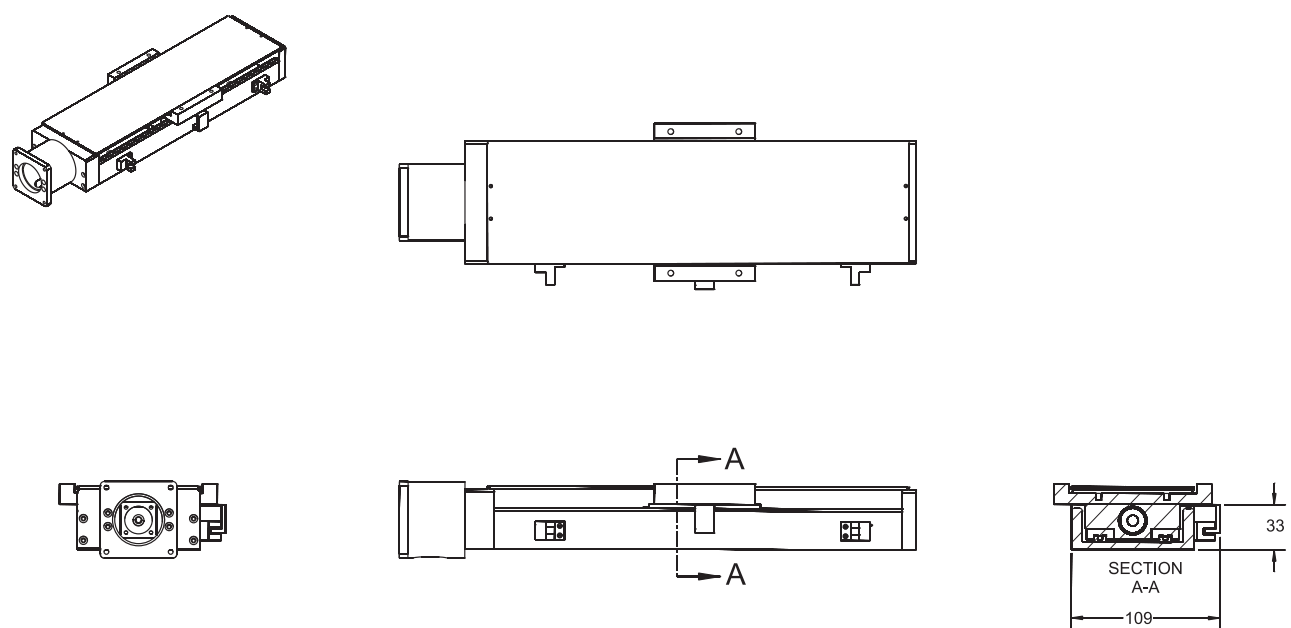
Travel	OAL	L	N	G	SERVO MOTOR		C	D	E	F	H
					A	B					
60	234.7	150	2	25							
110	284.7	200	2	50	53.2	60	49.5	8.9	50.1	M5 THREAD	8
210	384.7	300	3	50							
310	484.7	400	4	50							
410	584.7	500	5	50							

TA 33B DW (continued)

TA 33B DW With PX Proximity Sensors



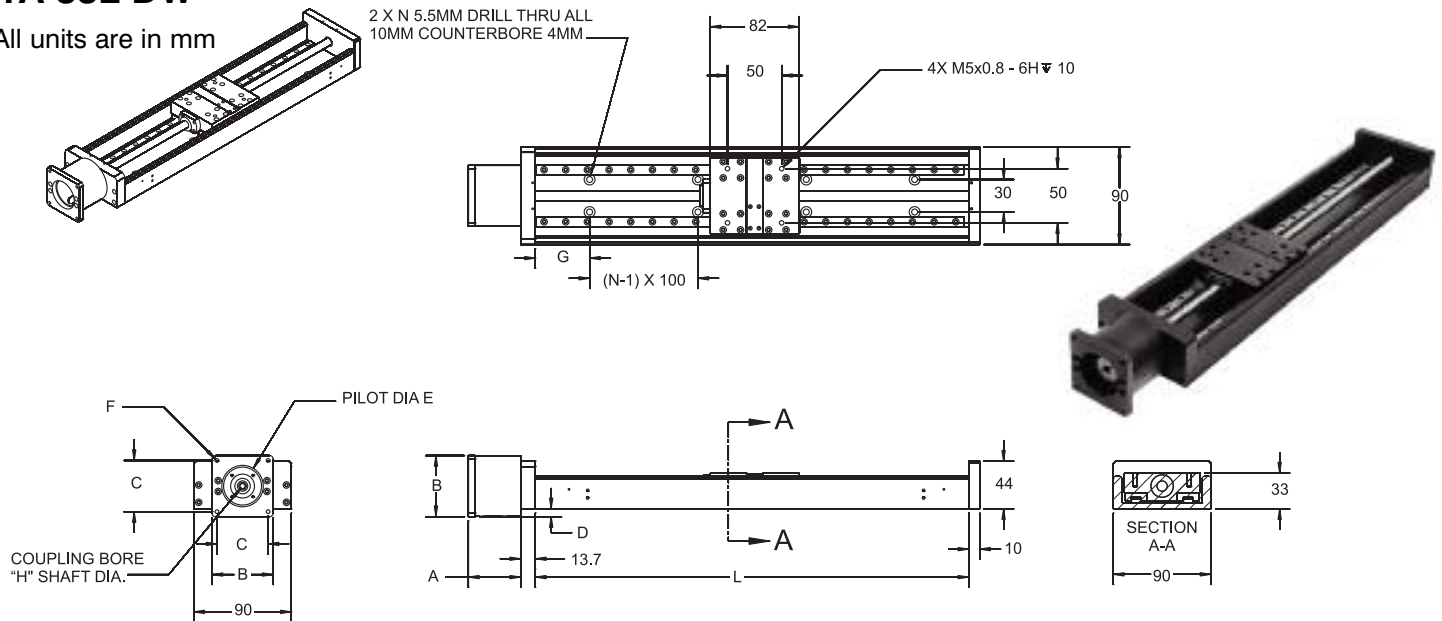
TA 33B DW With PH Photo Sensors



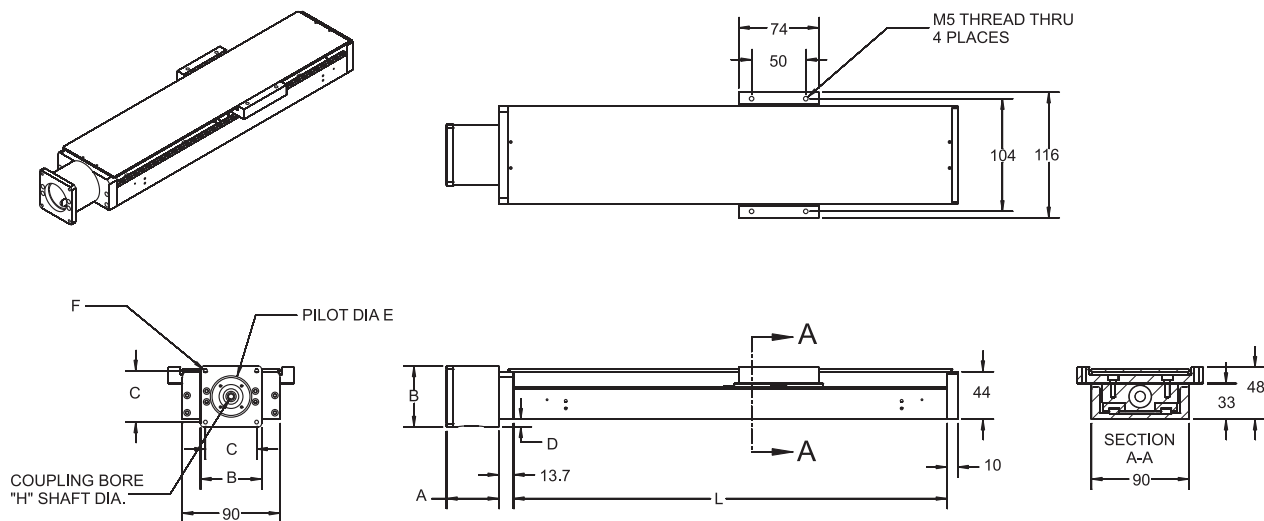
TA 33L DW

TA 33L DW

All units are in mm



TA 33L DW With Cover



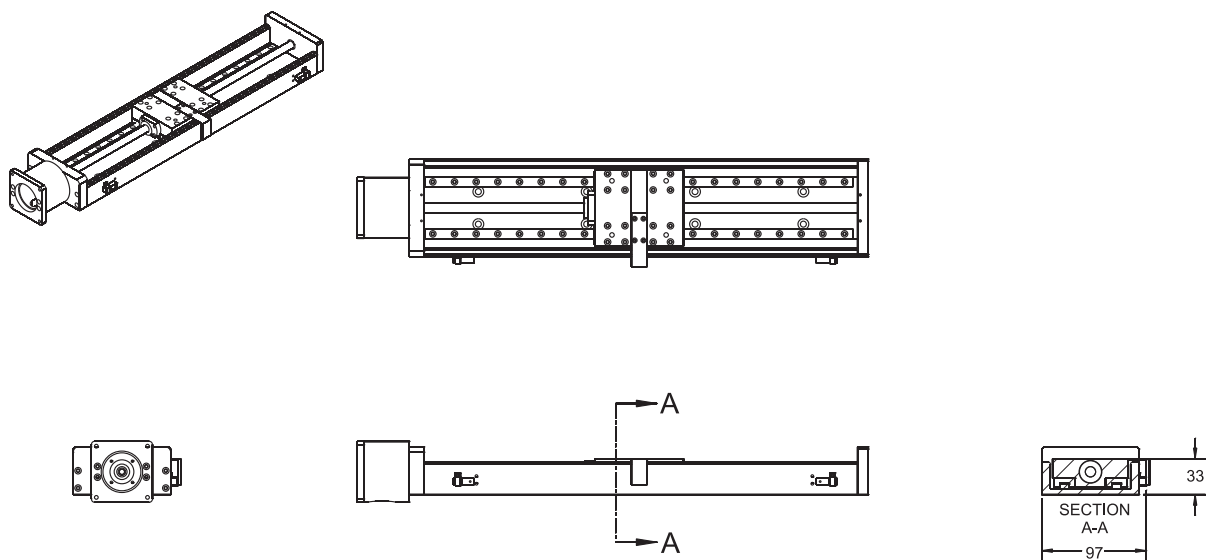
Motor Options

Travel	OAL	L	N	G	STEPPER MOTOR						
					A	B	C	D	E	F	H
60	221.8	150	2	25							
110	271.8	200	2	50	48.1	56.4	47.2	7.2	38.2	8-32 THREAD	6.35(.250")
210	371.8	300	3	50							
310	471.8	400	4	50							
410	571.8	500	5	50							

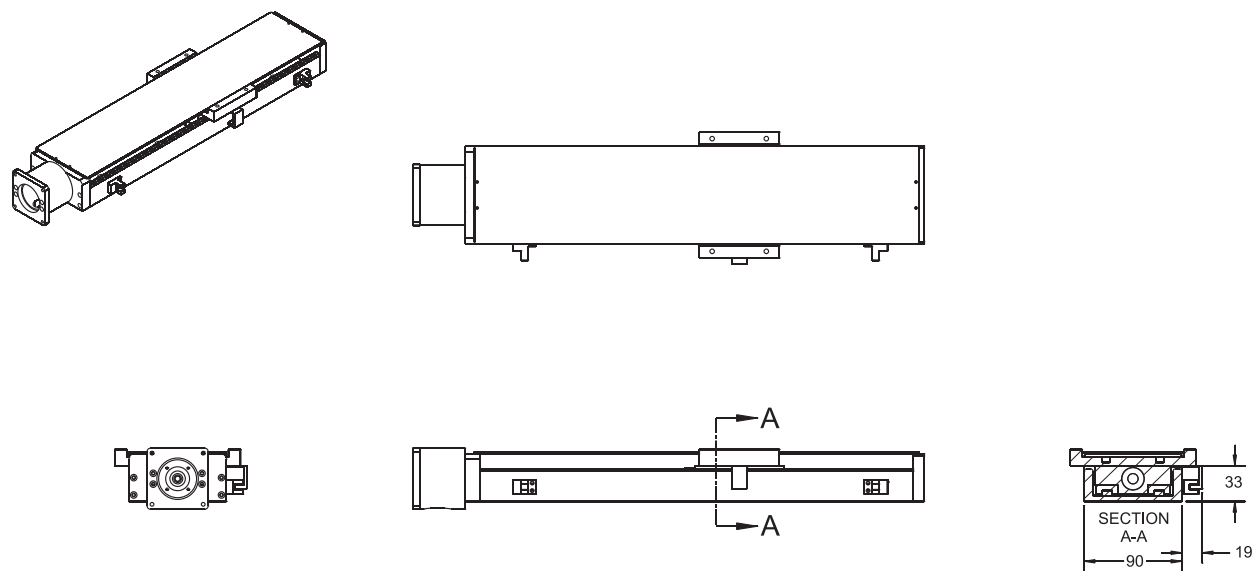
Travel	OAL	L	N	G	SERVO MOTOR						
					A	B	C	D	E	F	H
60	226.9	150	2	25							
110	276.9	200	2	50	53.2	60	49.5	8.9	50.1	M5 THREAD	8
210	376.9	300	3	50							
310	476.9	400	4	50							
410	576.9	500	5	50							

TA 33L DW (continued)

TA 33L DW With PX Proximity Sensors



TA 33L DW With PH Photo Sensors





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