

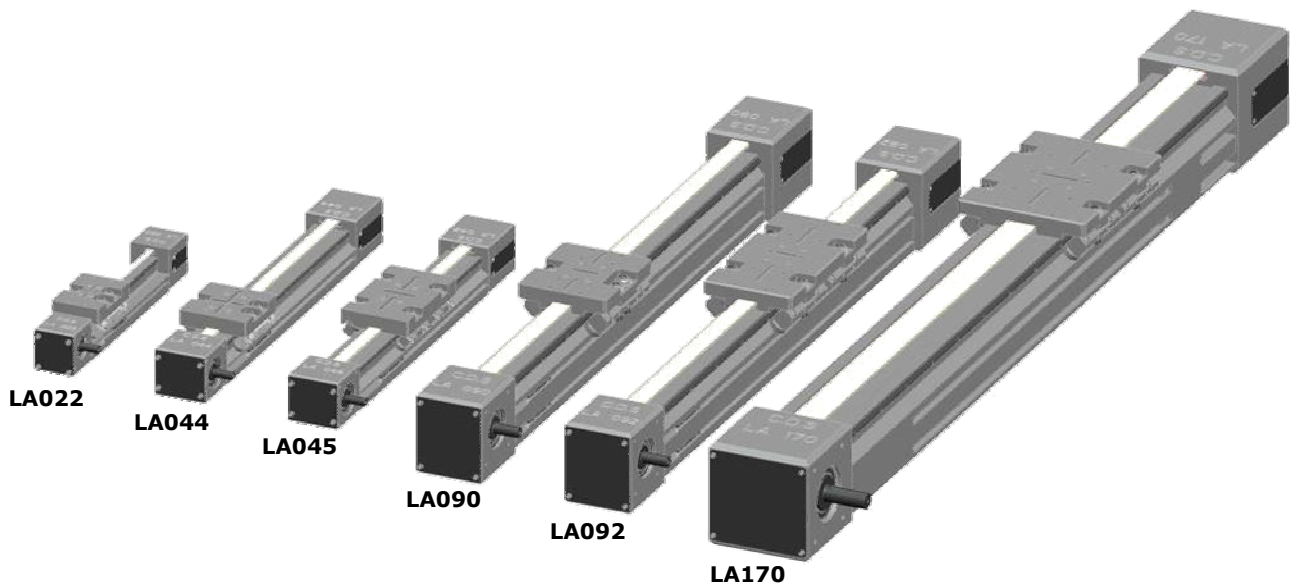
LINEAR ACTUATOR LA - SERIES

19 Oct. '09

Doc.: C009ING/3

LINEAR ACTUATOR LA- SERIES

The **LA series** of belt driven actuators specifically for linear motion applications requiring both outstanding performance and precision.



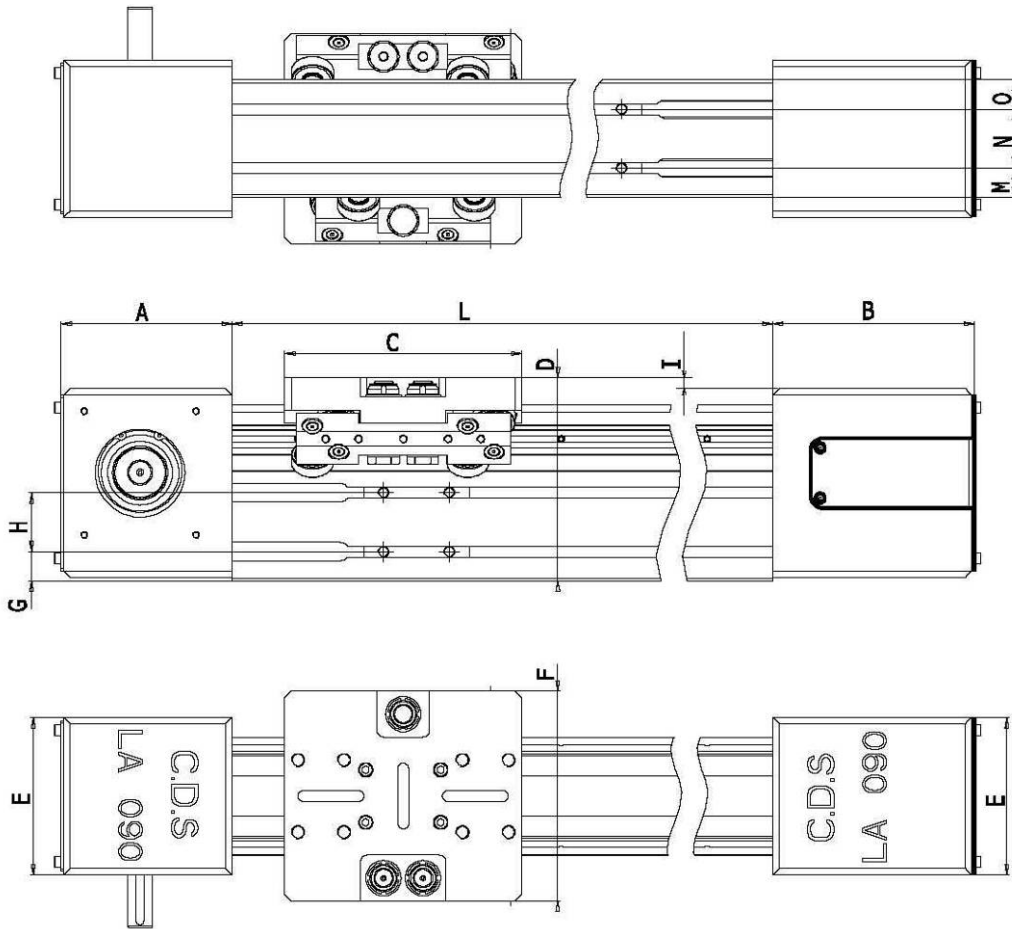
LA - Benefits

- Belt driven linear actuators designed for programmable servo motor input or linear indexing motions.
- Available in single axis or as multi axis modules for Cartesian and Gantry robots
- CDS provides a rigid T-slot extruded frame design for easy integration and installation
- CDS proprietary design provides fixture/tool mounting carriage which rides on double guided prismatic linear rails.
- Fixture/Tooling carriage utilizes a roller bearing design with zero backlash and which is sealed and lubed for life.
- Dynamic response time and speeds beyond what is generally attainable from traditional belt driven actuators.
- Several Model sizes with different options are available in lengths up to 6 meters.

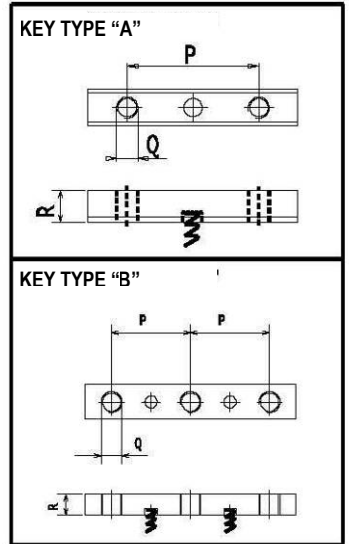
LA - Features

- Acceleration rates in excess of 3g
- Speeds up to 5 meter/sec.
- High performance polyurethane/steel reinforced belt
- Supports high weights and heavy loads.
- Unidirectional repeatability to $\pm 100\mu\text{m}$, bi-directional to an unequaled $\pm 40\mu\text{m}$.
- All bearings are Lubed-for-Life, no maintenance required.
- Available with mounting for any motor types.

DIMENSIONS and DETAILS FOR MOUNTING THE LINEAR ACTUATOR

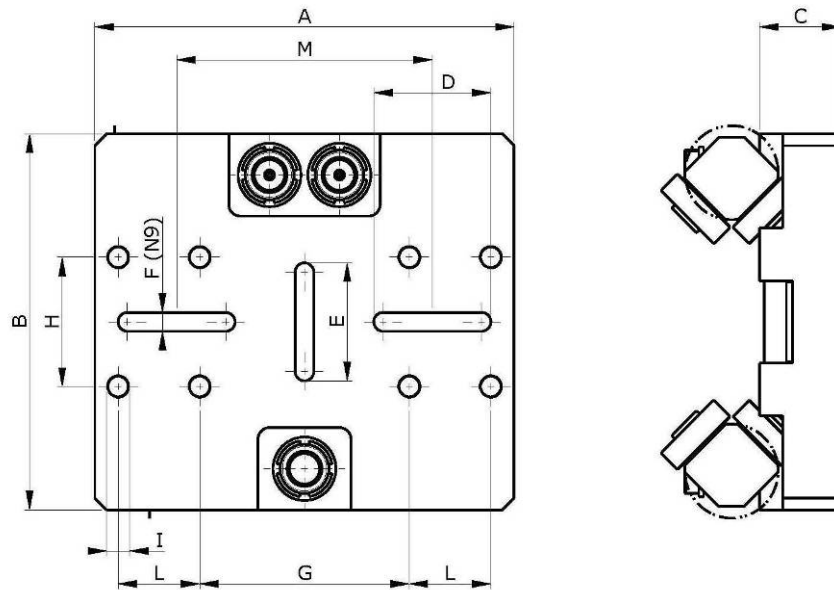


MOUNTING KEY DETAIL ASSE

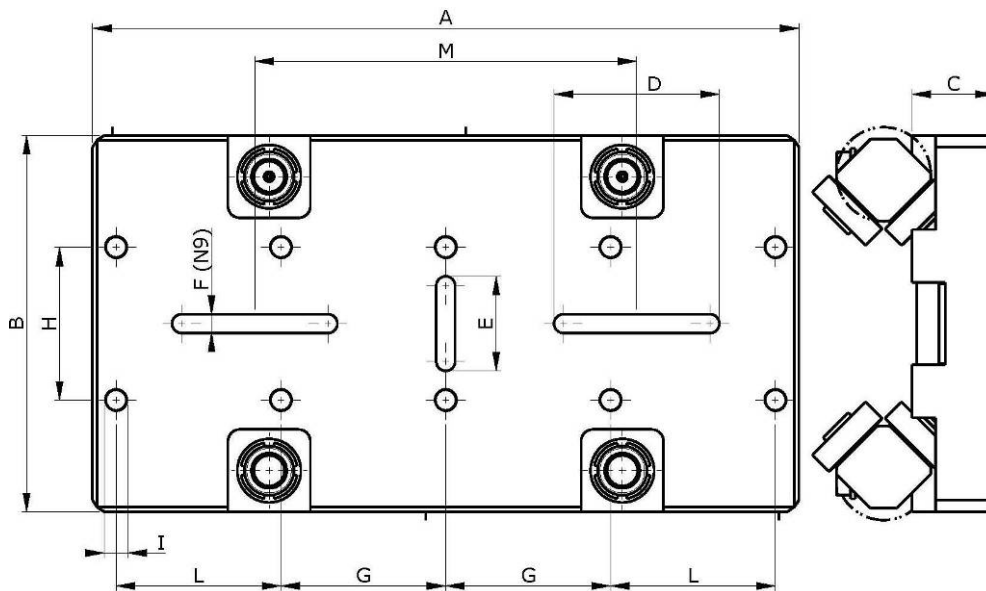


DIMENSIONS	A	B	C	D	E	F	G	H	I	L	Max Stroke (mm)	M	N	O	P	Q	R	Order code
LA022	72	72	120	90	70	85	20	.	14.5	250	120	12.5	45	12.5	25	M6x2 Threads	6.5	LA022 - 250
										400	270							LA022 - 400
										650	520							LA022 - 650
LA044	85	105	120	99	90	120	22.5	.	14	400	270	22.5	45	22.5	50	M8x2 Threads	9	LA044 - 400
										500	370							LA044 - 500
										600	470							LA044 - 600
										1000	870							LA044 - 1000
										1250	1120							LA044 - 1250
LA045	85	105	190	99	90	120	22.5	.	14	400	200	22.5	45	22.5	50	M8x2 Threads	9	LA045 - 400
										500	300							LA045 - 500
										600	400							LA045 - 600
										1000	800							LA045 - 1000
										1250	1050							LA045 - 1250
LA090	130	153	180	156	120	160	22.5	45	8	550	360	22.5	45	22.5	50	M8x2 Threads	9	LA090 - 550
										750	560							LA090 - 750
										1000	810							LA090 - 1000
										1350	1160							LA090 - 1350
										1850	1660							LA090 - 1850
LA092	130	153	300	156	120	160	22.5	45	8	550	240	22.5	45	22.5	50	M8x2 Threads	9	LA092 - 550
										750	440							LA092 - 750
										1000	690							LA092 - 1000
										1350	1040							LA092 - 1350
										1850	1540							LA092 - 1850
LA170	172	198	300	194	180	230	34.5	50	4.5	1000	690	35	100	35	45	M12x3 Threads	12	LA170 - 1000
										1850	1540							LA170 - 1850
										2350	2040							LA170 - 2350

Please contact our technical office for different lengths (size 'L')

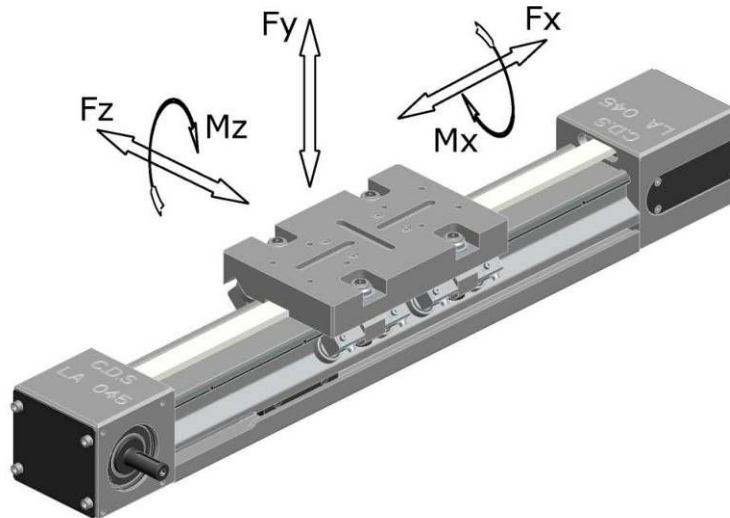


DIMENSIONS	A	B	C	D	E	F	G	H	I	L	M
LA022	120	85	28	60	25	6 (N9)	100	30	M6 N° 4 Threads	.	.
LA044	120	120	28	100	60	8 (N9)	80	40	M6 N° 4 Threads	.	.
LA090	180	160	35	50	50	8 (N9)	90	55	M10 N° 8 Threads	35	110



DIMENSIONS	A	B	C	D	E	F	G	H	I	L	M
LA045	190	120	28	60	60	8 (N9)	80	40	M6 N° 8 Threads	40	87
LA092	300	160	35	70	40	8 (N9)	70	55	M10 N° 10 Threads	70	162
LA170	300	230	35	70	70	8 (N9)	70	100	M10 N° 10 Threads	70	162

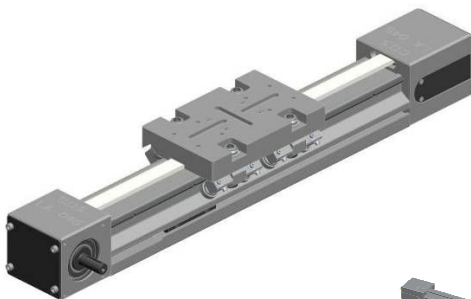
FORCES and MOMENTS



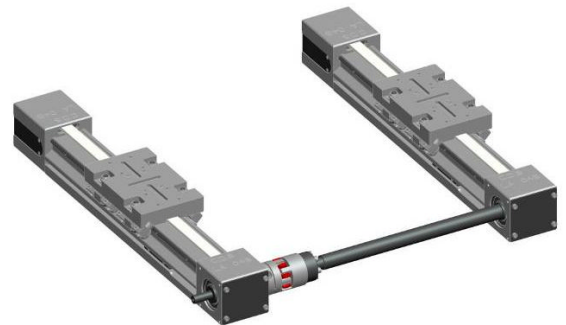
DIMENSIONS		Fx (N)	Fy (N)	Fz (N)	Mx (Nm)	Mz (Nm)
LA022	Static	450	750	750	35	35
	Dynamic	300	750	750	25	25
LA044	Static	1000	1000	1000	50	70
	Dynamic	650	1000	1000	35	35
LA045	Static	1000	1500	1500	70	90
	Dynamic	650	1500	1500	45	50
LA090	Static	1500	2000	2000	100	200
	Dynamic	1250	2000	2000	85	170
LA092	Static	1500	3000	3000	170	350
	Dynamic	1250	3000	3000	130	300
LA170	Static	2000	3500	3500	200	400
	Dynamic	1750	3500	3500	170	350

MOUNTING EXAMPLES

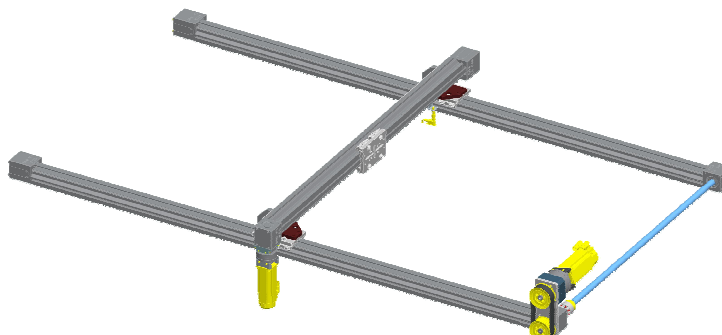
SINGLE LINEAR ACTUATOR



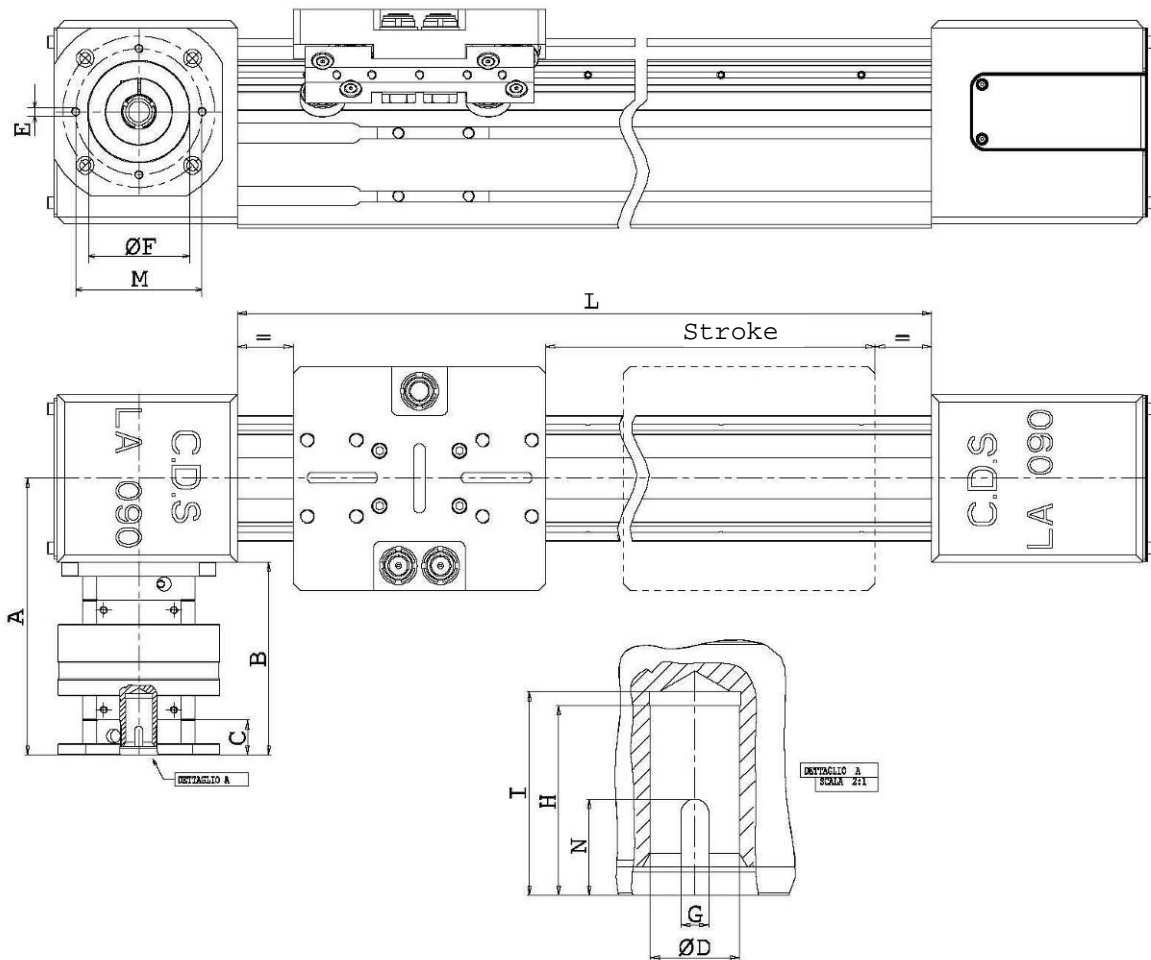
PARALLEL LINEAR ACTUATOR



MULTI-AXIS



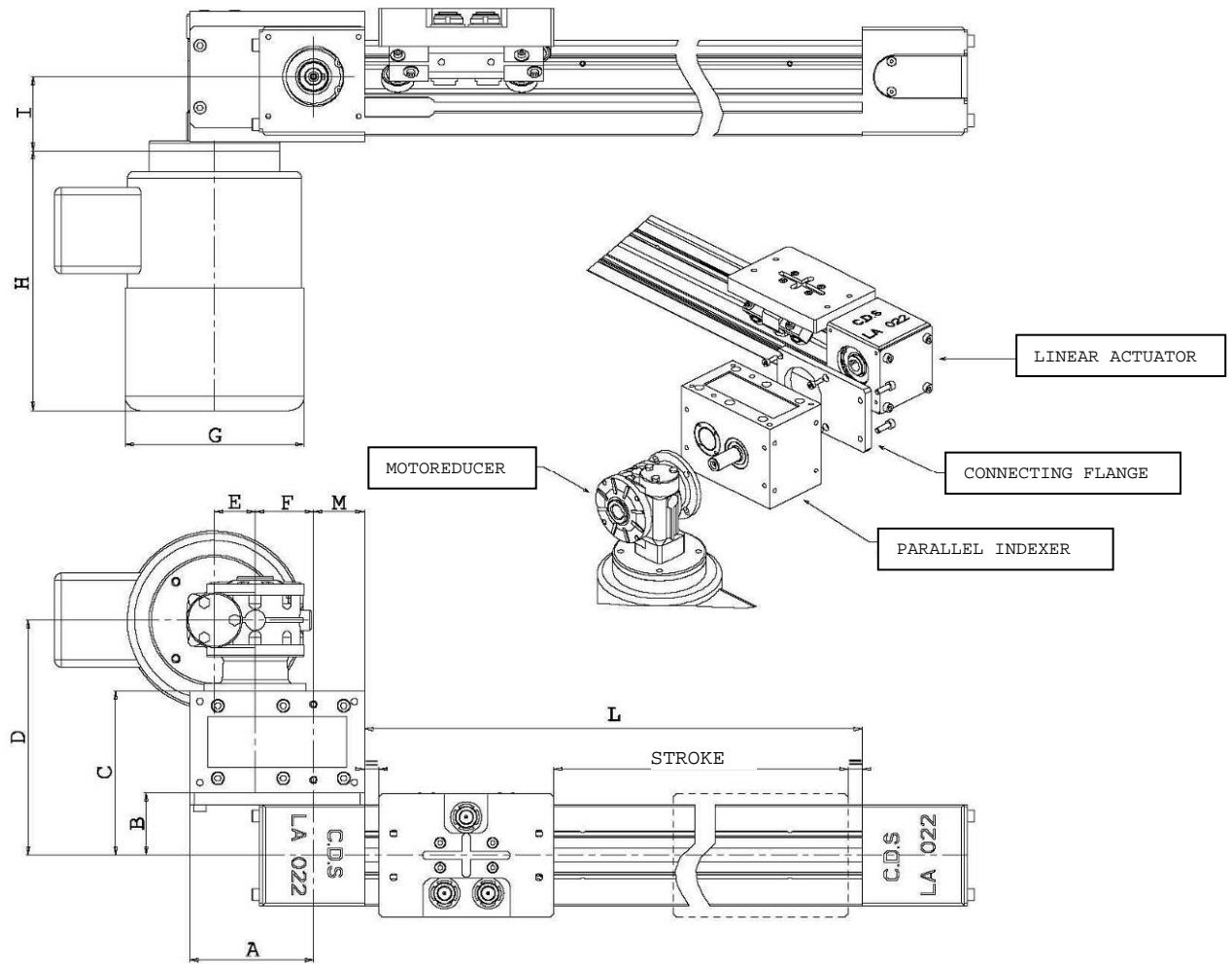
LINEAR ACTUATOR DRIVEN THROUGH EPICYCLOID ROLLER CAM REDUCER



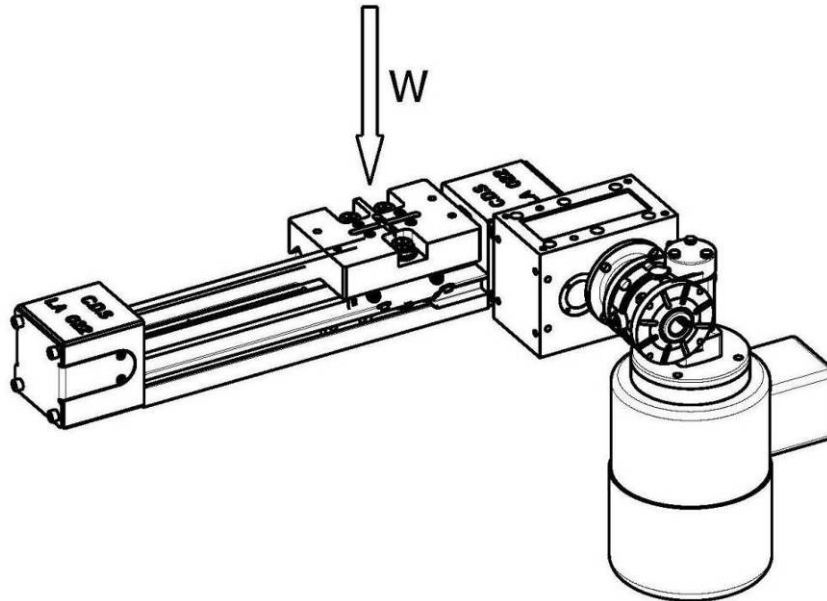
DIMENSIONS	A	B	C	D	E	F	G	H	I	L	Max. Stroke (mm)	M	N	Order code
LA022	143	108	20	9	M4	40	3	21	23	250	120	63	15.5	LA022 - 250 - CR039HHR10
										400	270			LA022 - 400 - CR039HHR10
										650	520			LA022 - 650 - CR039HHR10
LA044	153	108	20	9	M4	40	3	21	23	400	270	63	15.5	LA044 - 400 - CR039HHR10
										500	370			LA044 - 500 - CR039HHR10
										600	470			LA044 - 600 - CR039HHR10
										1000	870			LA044 - 1000 - CR039HHR10
										1250	1120			LA044 - 1250 - CR039HHR10
LA045	153	108	20	9	M4	40	3	21	23	400	200	63	15.5	LA045 - 400 - CR039HHR10
										500	300			LA045 - 500 - CR039HHR10
										600	400			LA045 - 600 - CR039HHR10
										1000	800			LA045 - 1000 - CR039HHR10
										1250	1050			LA045 - 1250 - CR039HHR10
LA090	197	137	25	14	M5	60	5	41.5	43.5	550	360	75	20.5	LA090 - 550 - CR055HHR10
										750	560			LA090 - 750 - CR055HHR10
										1000	810			LA090 - 1000 - CR055HHR10
										1350	1160			LA090 - 1350 - CR055HHR10
										1850	1660			LA090 - 1850 - CR055HHR10
LA092	197	137	25	14	M5	60	5	41.5	43.5	550	240	75	20.5	LA092 - 550 - CR055HHR10
										750	440			LA092 - 750 - CR055HHR10
										1000	690			LA092 - 1000 - CR055HHR10
										1350	1040			LA092 - 1350 - CR055HHR10
										1850	1540			LA092 - 1850 - CR055HHR10
LA170	320.5	230.5	32	24	M8	110	8	58	60	1000	690	130	27.5	LA170 - 1000 - CR100HHR10
										1850	1540			LA170 - 1850 - CR100HHR10
										2350	2040			LA170 - 2350 - CR100HHR10

Standard reduction ratio of epicycloid roller cam reducer is 10:1
Different ratios possible on request

LINEAR ACTUATOR DRIVE THROUGH MECHANICAL PARALLEL INDEXER



DIMENSIONS	A	B	C	D	E	F	G	H	I	L	Max. Stroke (mm)	M	Cod. Ord.
LA022	85	43	113	162	28	40	121	237	51.5	250	75	35	LA022 - I 75 - IP40 T*
											100		LA022 - I 100 - IP40 T*
											112		LA022 - I 112 - IP40 T*
											150		LA022 - I 150 - IP40 T*
											200		LA022 - I 200 - IP40 T*
											250		LA022 - I 250 - IP40 T*
LA044	135	55	150	232	40	65	121	237	63.5	400	104	55	LA044 - I 104 - IP65 T*
											139		LA044 - I 139 - IP65 T*
											156		LA044 - I 156 - IP65 T*
											208		LA044 - I 208 - IP65 T*
											277		LA044 - I 277 - IP65 T*
											347		LA044 - I 347 - IP65 T*
LA045	135	55	150	232	40	65	121	237	63.5	400	104	55	LA045 - I 104 - IP65 T*
											139		LA045 - I 139 - IP65 T*
											156		LA045 - I 156 - IP65 T*
											208		LA045 - I 208 - IP65 T*
											277		LA045 - I 277 - IP65 T*
											347		LA045 - I 347 - IP65 T*
LA090	135	70	165	247	40	65	121	237	63.5	550	160	55	LA090 - I 160 - IP65 T*
											213		LA090 - I 213 - IP65 T*
											240		LA090 - I 240 - IP65 T*
											320		LA090 - I 320 - IP65 T*
											427		LA090 - I 427 - IP65 T*
											533		LA090 - I 533 - IP65 T*
LA092	135	70	165	247	40	65	121	237	63.5	550	160	55	LA092 - I 160 - IP65 T*
											213		LA092 - I 213 - IP65 T*
											240		LA092 - I 240 - IP65 T*
											320		LA092 - I 320 - IP65 T*
											427		LA092 - I 427 - IP65 T*
											533		LA092 - I 533 - IP65 T*
LA170	210	105	255	346	85	105	178	335	118	1000	448	90	LA170 - I 448 - IP105 T*
											597		LA170 - I 597 - IP105 T*
											672		LA170 - I 672 - IP105 T*
											896		LA170 - I 896 - IP105 T*
											1195		LA170 - I 1195 - IP105 T*
											1493		LA170 - I 1493 - IP105 T*



DIMENSIONS	L	Stroke (mm)	TRANSFER TIME T* (sec.)				Order code
			T1 0.6	T2 0.8	T3 1.15	T4 2.25	
LA022	250	75	200	200	200	.	LA022 - I 75 - IP40 T*
		100	200	200	200	.	LA022 - I 100 - IP40 T*
	400	112	200	200	200	.	LA022 - I 112 - IP40 T*
		150	200	200	200	.	LA022 - I 150 - IP40 T*
		200	200	200	200	.	LA022 - I 200 - IP40 T*
	250	72	120	200	.	LA022 - I 250 - IP40 T*	
LA044	400	104	230	350	350	.	LA044 - I 104 - IP65 T*
		139	140	250	350	.	LA044 - I 139 - IP65 T*
		156	130	220	350	.	LA044 - I 156 - IP65 T*
		208	120	200	350	.	LA044 - I 208 - IP65 T*
	500	277	70	120	240	.	LA044 - I 277 - IP65 T*
		347	40	60	120	.	LA044 - I 347 - IP65 T*
LA045	400	104	680	700	700	700	LA045 - I 104 - IP65 T*
		139	520	700	700	700	LA045 - I 139 - IP65 T*
		156	370	660	700	700	LA045 - I 156 - IP65 T*
	500	208	290	520	700	700	LA045 - I 208 - IP65 T*
		277	210	380	700	700	LA045 - I 277 - IP65 T*
		347	120	210	430	700	LA045 - I 347 - IP65 T*
LA090	550	160	280	510	800	800	LA090 - I 160 - IP65 T*
		213	220	390	770	800	LA090 - I 213 - IP65 T*
		240	160	280	550	800	LA090 - I 240 - IP65 T*
		320	120	220	430	800	LA090 - I 320 - IP65 T*
	750	427	90	160	310	800	LA090 - I 427 - IP65 T*
		533	50	90	180	720	LA090 - I 533 - IP65 T*
LA092	550	160	910	1500	1500	1500	LA092 - I 160 - IP65 T*
		213	560	1000	1500	1500	LA092 - I 213 - IP65 T*
		240	400	710	1390	1500	LA092 - I 240 - IP65 T*
		320	340	610	1190	1500	LA092 - I 320 - IP65 T*
		427	230	410	810	1500	LA092 - I 427 - IP65 T*
	750	533	130	240	480	1500	LA092 - I 533 - IP65 T*
LA170	1000	448	220	390	770	3000	LA170 - I 448 - IP105 T*
		597	170	300	600	2380	LA170 - I 597 - IP105 T*
		672	120	210	420	1690	LA170 - I 672 - IP105 T*
	1850	896	100	170	340	1370	LA170 - I 896 - IP105 T*
		1195	70	120	230	950	LA170 - I 1195 - IP105 T*
		1493	40	70	140	550	LA170 - I 1493 - IP105 T*

W (N)

ORDER CODE EXAMPLE:

LA045
Model size of
linear Actuator

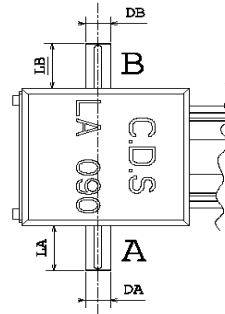
500
Slides length

M
Shaft type
M = Single extended
B = Double extended
(both sides have shaft
protruding)
C = Hollow
S = Special

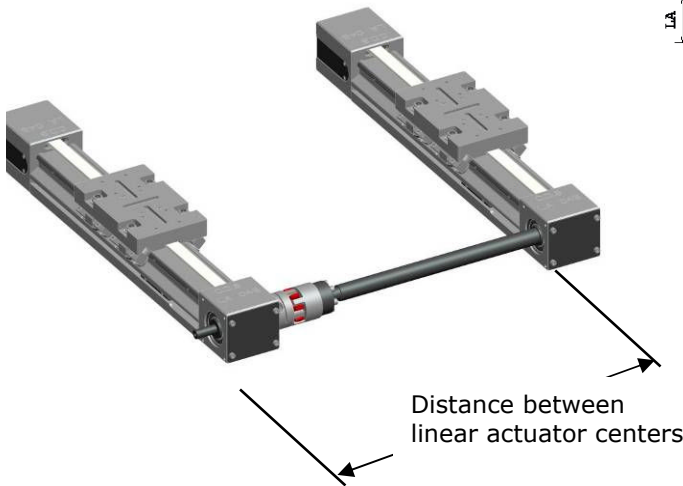
DA14 LA031
Shaft dimensions

P
Mounting version
P = Parallel

1000
Distance
between linear
actuators



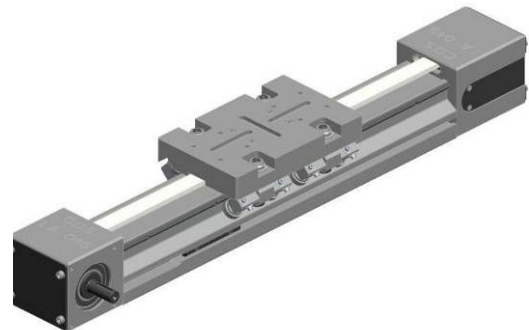
/ = Single



LA045
Model size of
linear Actuator

500
Slide length

CR039HHR10
Model size of
epicycloid cam
reducer

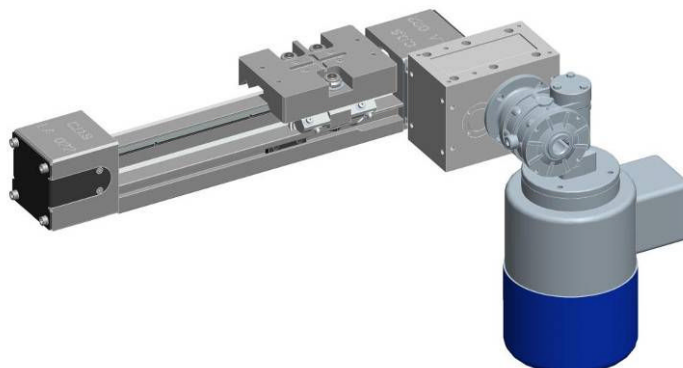


LA045
Model size of linear
actuator

I 533
Carriage stroke

IP65
Model size of
mechanical parallel
indexer

T1
Transfer time





**Your Specialist for
Precision Motion Control**



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