

# Welcome to $LINTECH^{\, ext{@}}$



For over 44 years *LINTECH* has designed, engineered, and manufactured linear positioning components for use in a wide range of applications. Whether it is a standard positioning component or a custom positioning assembly, *LINTECH* takes great pride in manufacturing a quality product.

At *LINTECH* we are proud to provide the motion control user with this product guide. It was developed to assist you with the design, selection, and implementation of mechanical positioning components.

Depending on the requirements, standard positioning components, or systems, can often be assembled and shipped in less than 2 weeks. Custom positioning assemblies require a different approach. We evaluate your special application, use our many years of experience to guide you, and then manufacture a quality product designed to meet your performance specifications.

LINTECH's technical support consists of a well trained inside customer service department, an experienced application engineering staff, and a versatile machining facility.

Our local technical support group consists of Automation Specialists located throughout the World. These Automation Specialists are experienced in the use of electronic and mechanical motion control products. They are well trained on the performance capabilities of *LINTECH* positioning components.

LINTECH is constantly designing new products and improving upon the many options available with our standard products. Whether it is a standard or custom positioning system required, visit our website, call, or e-mail us. We look forward to hearing from you.

Visit our website, or call us for the location of the nearest Automation Specialist in your area:

# LINTECH®

1845 Enterprise Way Monrovia, CA. 91016

Toll Free: (800) 435 - 7494 Phone: (626) 358 - 0110 Fax: (626) 303 - 2035

Web Site: <a href="www.LintechMotion.com">www.LintechMotion.com</a>
E-Mail: Lintech@LintechMotion.com



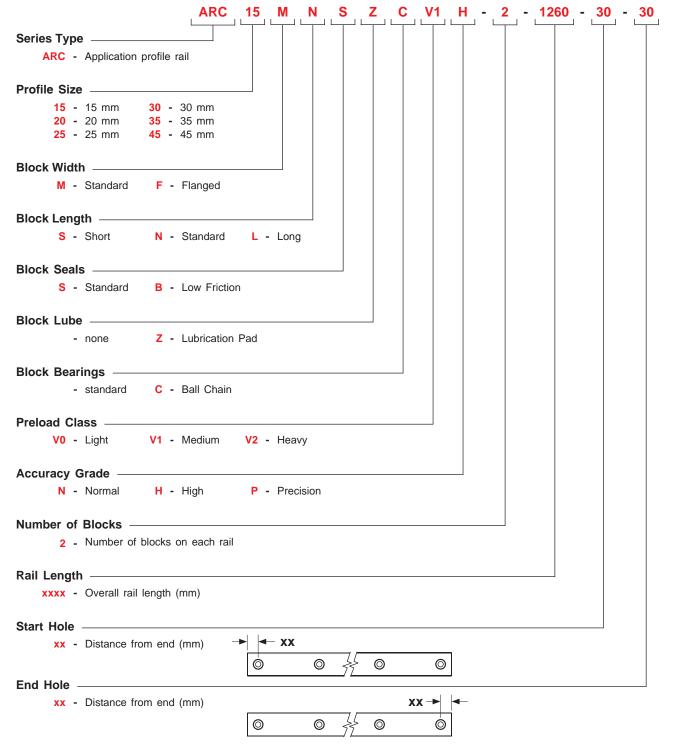
version: 05/2015

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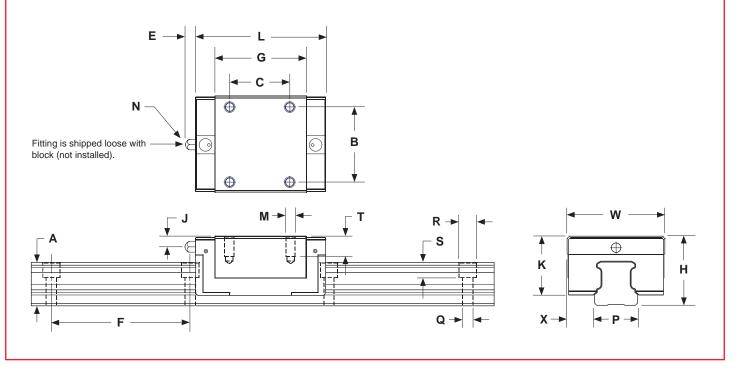
- \* Application Rail
- \* 4 rows of re-circulating balls
- \* Equal loading in all directions
- \* Dust proof design
- \* Alloy steel bearing, rail, and balls
- \* Self lube reservoir optional



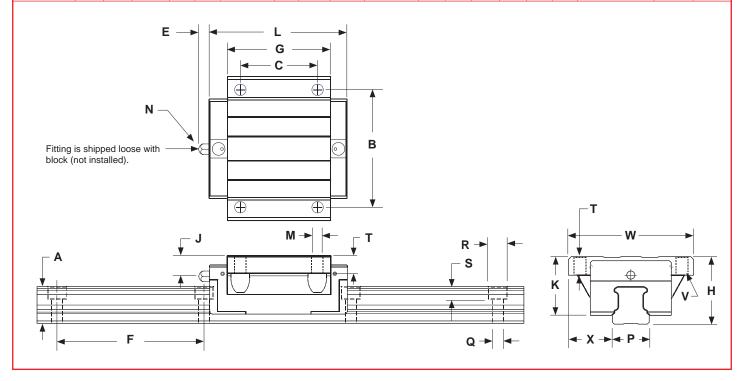
# Load Capacities - ARC series

	Dynamic Load	Static Load	St	atic Moment Lo	ads	
Model Number	Capacity C <sub>50</sub> (kN @ 50 km)	Capacity C <sub>0</sub> (kN)	M <sub>r</sub> (Nm)	M <sub>p</sub> (Nm)	M <sub>y</sub> (Nm)	M <sub>y</sub>
ARC 15 MS ARC 15 FS	9.7	12.1	100	50	50	M <sub>p</sub> M <sub>r</sub>
ARC 15 MN ARC 15 FN	12.5	17.5	140	105	105	
ARC 20 MS ARC 20 FS	15.7	19.3	205	100	100	
ARC 15 ML	16.9	26.9	215	235	235	
ARC 20 MN ARC 20 FN	21.5	30.0	325	230	230	
ARC 25 MS ARC 25 FS	22.9	27.3	350	160	160	
ARC 20 ML	25.7	38.5	415	390	390	
ARC 25 MN ARC 25 FN	31.2	42.5	540	385	385	
ARC 30 MS ARC 30 FS	29.3	33.1	520	230	230	
ARC 30 MN ARC 30 FN	41.3	53.7	845	565	565	
ARC 30 ML	49.9	70.2	1105	950	950	
ARC 35 MN ARC 35 FN	57.8	82.9	1700	1080	1080	
ARC 35 ML	68.9	106.5	2185	1755	1755	
ARC 45 MN	89.8	122.1	3200	1910	1910	
ARC 45 ML	112.8	169.1	4430	3460	3460	

		Outli				В		mensio	ns				F			sions	Weight	
Model Number	Height	(mm)	Length				(m	m)							(mm)		Block	Rail
Trainiso.	Н	W	L	В	С	M×T	K	G	N	J	E	Р	Х	Α	F	QxRxS	(kg)	(kg/m)
ARC 15 MS			41.2		-			26.0									0.11	
ARC 15 MN	24	34	55.5	26	26	M4 x 7	20.7	40.3	M3 x 6.5	4.5	3.5	15	9.5	15	60	4.5 x 7.5 x 5.3	0.16	1.29
ARC 15 ML			76.2		34			61.0									0.24	
ARC 20 MS			49.2		-			32.2									0.17	
ARC 20 MN	28	42	69.0	32	32	M5 x 7	23.0	52.0	M3 x 7.5	4	10	20	11	20	60	6 x 9.5 x 8.5	0.27	2.28
ARC 20 ML			87.2		45			70.2									0.33	
ARC 25 MS	00	40	57.4	0.5	-	MC 0	07.0	38.4	MO 7.5	_	40	00	40.5	00	00	7 44 0	0.30	0.00
ARC 25 MN	33	48	81.2	35	35	M6 x 9	27.0	62.2	M6 x 7.5	5	12	23	12.5	23	60	7 x 11 x 9	0.42	3.02
ARC 30 MS			68.0		-			44.0									0.56	
ARC 30 MN	42	60	95.5	40	40	M8 x 10	35.2	71.5	M6 x 8.5	7.5	12	28	16	27	80	9 x 14 x 12	0.80	4.38
ARC 30 ML			118.0		60			94.0									1.14	
ARC 35 MN	40	70	111.2	F0	50	MO 40	40.4	86.2	MC 40	٥	40	2.4	40	20	00	0 44 40	1.12	0.70
ARC 35 ML	48	70	136.6	50	72	M8 x 13	40.4	111.6	M6 x 10	8	12	34	18	32	80	9 x 14 x 12	1.54	6.79
ARC 45 MN	00	00	135.5	00	60	N440 47	F0.7	102.5	DT4/0 40.5	44.4	4.4	45	00.5	00	405	44 00 47	2.12	40.50
ARC 45 ML	60	86	171.5	60	80	M10 x 17	50.7	138.5	PT1/8 x 12.5	11.1	14	45	20.5	39	105	14 x 20 x 17	3.16	10.53

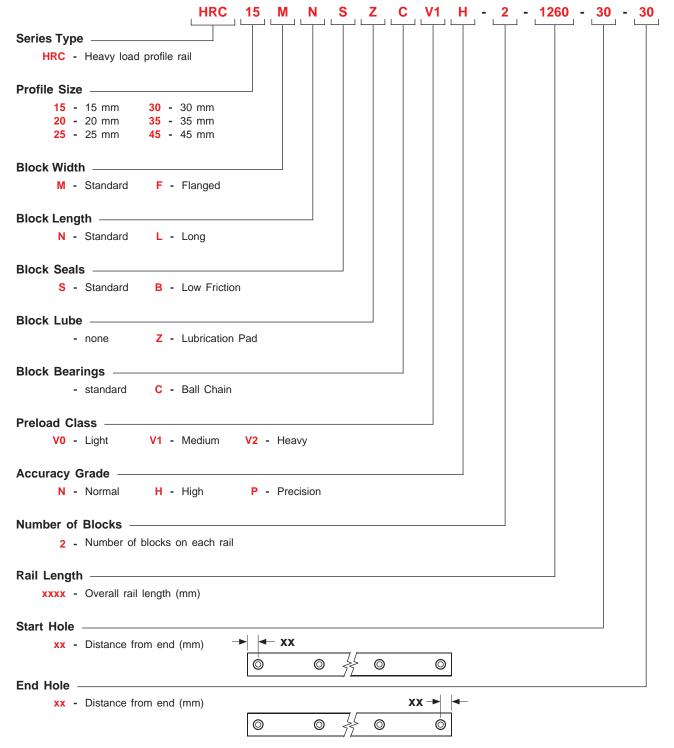


		Outli	-			Block Dimensions (mm)								F			sions	Weight	
Model Number	Height <b>H</b>	(mm) Width W	Length	В	С	M × T	٧	K	G	N	J	Е	Р	х	Α	(mm)	QxRxS	Block (kg)	Rail (kg/m)
ARC 15 FS ARC 15 FN	24	52	41.2 55.5	41	- 26	M5 x 7	M4	20.7	26.0 40.3	M3 x 6.5	4.5	3.5	15	18.5	15	60	4.5 x 7.5 x 5.3	0.12 0.18	1.29
ARC 20 FS ARC 20 FN	28	59	49.2 69.0	49	- 32	M6 x 10	M5	23.0	32.2 52.0	M3 x 7.5	4	10	20	19.5	20	60	6 x 9.5 x 8.5	0.21 0.34	2.28
ARC 25 FS ARC 25 FN	33	73	57.4 81.2	60	- 35	M8 x 12	M6	27.0	38.4 62.2	M6 x 7.5	5	12	23	25	23	60	7 x 11 x 9	0.35 0.53	3.02
ARC 30 FS ARC 30 FN	42	90	68.0 95.5	72	- 40	M10 x 15	M8	35.2	44.0 71.5	M6 x 8.5	7.5	12	28	31	27	80	9 x 14 x 12	0.75 1.20	4.38
ARC 35 FN	48	100	111.2	82	50	M10 x 15	M8	40.2	86.2	M6 x 10	8	12	34	33	32	80	9 x 14 x 12	1.58	6.79





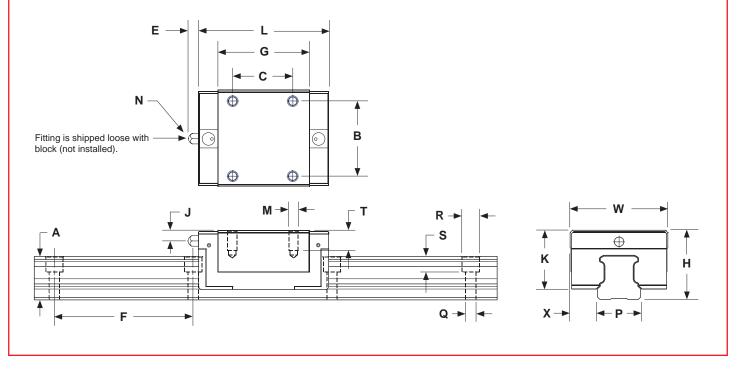
- \* Heavy Load Rail
- \* 4 rows of re-circulating balls
- \* Equal loading in all directions
- \* Dust proof design
- \* Alloy steel bearing, rail, and balls
- \* Self lube reservoir optional



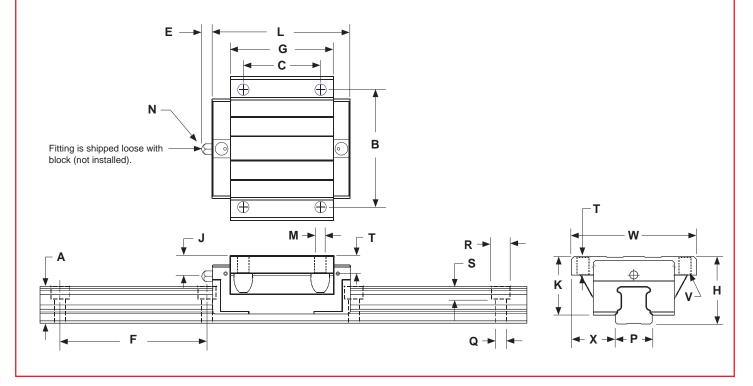
# Load Capacities - HRC series

Mandal	Dynamic Load	Static Load	Sta	tic Moment Loa	ads	,
Model Number	Capacity C <sub>50</sub> (kN @ 50 km)	Capacity C <sub>0</sub> (kN)	M <sub>r</sub> (Nm)	M <sub>p</sub> (Nm)	<b>M</b> y (Nm)	M <sub>y</sub>
HRC 15 MN HRC 15 FN	12.5	17.5	140	105	105	M <sub>p</sub> M <sub>r</sub>
HRC 20 MN HRC 20 FN	21.5	30.0	325	230	230	
HRC 20 ML HRC 20 FL	25.7	38.5	415	390	390	
HRC 25 MN HRC 25 FN	31.2	42.5	540	385	385	
HRC 25 ML HRC 25 FL	38.7	57.7	735	710	710	
HRC 30 MN HRC 30 FN	41.3	53.7	845	565	565	
HRC 30 ML HRC 30 FL	49.9	70.2	1105	950	950	
HRC 35 MN HRC 35 FN	57.8	82.9	1700	1080	1080	
HRC 35 ML HRC 35 FL	68.9	106.5	2185	1755	1755	
HRC 45 MN HRC 45 FN	89.8	122.1	3200	1910	1910	
HRC 45 ML HRC 45 FL	112.8	169.1	4430	3460	3460	

Model		Outli (mm)	-		Block Dimensions (mm)								R		oimen (mm)	sions	Weight	
Number	Height <b>H</b>	Width	Length	В	С	M × T	K	G	N	J	E	Р	х	Α	F	QxRxS	Block (kg)	Rail (kg/m)
HRC 15 MN	28	34	55.5	26	26	M4 x 7	24.7	40.3	M3 x 6.5	8.5	3.5	15	9.5	15	60	4.5 x 7.5 x 5.3	0.18	1.29
HRC 20 MN HRC 20 ML	30	44	69.0 87.2	32	36 50	M5 x 8.5	25.0	52.0 70.2	M3 x 7.5	6	10	20	12	20	60	6 x 9.5 x 8.5	0.32 0.40	2.28
HRC 25 MN HRC 25 ML	40	48	81.2 105.0	35	35 50	M6 x 9	34.0	62.2 86.0	M6 x 7.5	12	12	23	12.5	23	60	7 x 11 x 9	0.58 0.69	3.02
HRC 30 MN HRC 30 ML	45	60	95.5 118.0	40	40 60	M8 x 12	38.4	71.5 94.0	M6 x 8.5	10.5	12	28	16	27	80	9 x 14 x 12	0.90 1.15	4.38
HRC 35 MN HRC 35 ML	55	70	111.2 136.6	50	50 72	M8 x 13	47.4	86.2 111.6	M6 x 10	15	12	34	18	32	80	9 x 14 x 12	1.43 1.95	6.79
HRC 45 MN HRC 45 ML	70	86	135.5 171.5	60	60 80	M10 x 20	60.7	102.5 138.5	PT1/8 x 12.5	21.1	14	45	20.5	39	105	14 x 20 x 17	2.79 4.06	10.53



Model		Outli (mm)			Block Dimensions (mm)								F	Weight					
Number	Height <b>H</b>	` '	,	В	С	M x T	٧	K	G	N	J	Е	Р	х	Α	(mm)	QxRxS	Block (kg)	Rail (kg/m)
HRC 15 FN	24	47	55.5	38	30	M5 x 7	M4	20.7	40.3	M3 x 6.5	4.5	3.5	15	16	15	60	4.5 x 7.5 x 5.3	0.18	1.29
HRC 20 FN HRC 20 FL	30	63	69.0 87.2	53	40	M6 x 10	M5	25.0	52.0 70.2	M3 x 7.5	6	10	20	21.5	20	60	6 x 9.5 x 8.5	0.40 0.51	2.28
HRC 25 FN HRC 25 FL	36	70	81.2 105.0	57	45	M8 x 12	M6	30.0	62.2 86.0	M6 x 7.5	8	12	23	23.5	23	60	7 x 11 x 9	0.63 0.87	3.02
HRC 30 FN HRC 30 FL	42	90	95.5 118.0	72	52	M10 x 15	M8	35.2	71.5 94.0	M6 x 8.5	7.5	12	28	31	27	80	9 x 14 x 12	1.11 1.39	4.38
HRC 35 FN HRC 35 FL	48	100	111.2 136.6	82	62	M10 x 15	M8	40.4	86.2 111.6	M6 x 10	8	12	34	33	32	80	9 x 14 x 12	1.55 2.00	6.79
HRC 45 FN HRC 45 FL	60	120	135.5 171.5	100	80	M12 x 18	M10	50.7	102.5 138.5	PT1/8 x 12.5	11.1	14	45	37.5	39	105	14 x 20 x 17	2.75 4.28	10.53



# **Unit Conversions**

## **Torque Conversions**

Present Units	Convert To	<b>Multiply By</b>
Gram-centimeters	newton-meters	0.0000981
Gram-centimeters	ounce-inches	0.0138874
Gram-centimeters	pound-inches	0.000868
Gram-centimeters	pound-feet	0.0000723
Newton-meters	gram-centimeters	10,197.162
Newton-meters	ounce-inches	141.612
Newton-meters	pound-inches	8.85
Newton-meters	pound-feet	0.73756
Ounce-inches	gram-centimeters	72.0077
Ounce-inches	newton-meters	0.007062
Ounce-inches	pound-inches	0.0625
Ounce-inches	pound-feet	0.005208
Pound-inches	gram-centimeters	1,152.0
Pound-inches	newton-meters	0.11299
Pound-inches	ounce-inches	16.0
Pound-inches	pound-feet	0.08333
Pound-feet	gram-centimeters	13,825.5
Pound-feet	newton-meters	1.3558
Pound-feet	ounce-inches	192.0
Pound-feet	pound-inches	12.0

## **Distance Conversions**

Present Units	Convert To	Multiply By
Arc-minutes	degrees	0.016666
Arc-seconds	degrees	0.000277
Centimeters	inches	0.3937
Centimeters	feet	0.03280
Centimeters	microns	10,000.0
Degrees	arc-minutes	60.0
Degrees	arc-seconds	3,600.0
Degrees	radians	0.017453
Feet	centimeters	30.48
Feet	meters	0.3048
Inches	centimeters	2.54
Inches	Km	0.0000254
Inches	meters	0.0254
Inches	microns	25,400.0
Inches	millimeters	25.4
Km	inches	39,370.0
Meters	feet	3.2808
Meters	inches	39.37
Meters	microns	1,000,000.0
Microns	centimeters	0.0001
Microns	inches	0.00003937
Microns	meters	0.000001
Microns	millimeters	0.001
Millimeters	inches	0.03937
Millimeters	microns	1,000.0
Radians	degrees	57.295779

## Reference : Handbook of Tables for Applied Engineering Science

## **Inertia Conversions**

Present Units	Convert To	Multiply By
Gram-cm <sup>2</sup>	ounce-inches <sup>2</sup>	0.00546745
Gram-cm <sup>2</sup>	ounce-inch-sec <sup>2</sup>	0.000014161
Gram-cm <sup>2</sup>	pound-inches <sup>2</sup>	0.000341716
Gram-cm <sup>2</sup>	pound-inch-sec <sup>2</sup>	0.000000885
Gram-cm <sup>2</sup>	pound-feet-sec <sup>2</sup>	0.000000074
Ounce-inches <sup>2</sup>	gram-cm <sup>2</sup>	182.901
Ounce-inches <sup>2</sup>	ounce-inch-sec <sup>2</sup>	0.00259008
Ounce-inches <sup>2</sup>	pound-inches <sup>2</sup>	0.0625
Ounce-inches <sup>2</sup>	pound-inch-sec <sup>2</sup>	0.00016188
Ounce-inches <sup>2</sup>	pound-feet-sec <sup>2</sup>	0.00001349
Ounce-inch-sec <sup>2</sup>	gram-cm <sup>2</sup>	70,615.4
Ounce-inch-sec <sup>2</sup>	ounce-inches <sup>2</sup>	386.0
Ounce-inch-sec <sup>2</sup>	pound-inches <sup>2</sup>	24.13045
Ounce-inch-sec <sup>2</sup>	pound-inch-sec <sup>2</sup>	0.0625
Ounce-inch-sec <sup>2</sup>	pound-feet-sec <sup>2</sup>	0.00520833
Pound-inches <sup>2</sup>	gram-cm <sup>2</sup>	2,926.41
Pound-inches <sup>2</sup>	ounce-inches <sup>2</sup>	16.0
Pound-inches <sup>2</sup>	ounce-inch-sec <sup>2</sup>	0.0414413
Pound-inches <sup>2</sup>	pound-inch-sec <sup>2</sup>	0.00259008
Pound-inches <sup>2</sup>	pound-feet-sec <sup>2</sup>	0.00021584
Pound-inch-sec <sup>2</sup>	gram-cm <sup>2</sup>	1,129,850.0
Pound-inch-sec <sup>2</sup>	ounce-inches <sup>2</sup>	6,177.4
Pound-inch-sec <sup>2</sup>	ounce-inch-sec <sup>2</sup>	16.0
Pound-inch-sec <sup>2</sup>	pound-inches <sup>2</sup>	386.0
Pound-inch-sec <sup>2</sup>	pound-feet-sec <sup>2</sup>	0.0833333
Pound-feet-sec <sup>2</sup>	gram-cm <sup>2</sup>	13,558,200.0
Pound-feet-sec <sup>2</sup>	ounce-inches <sup>2</sup>	74,128.9
Pound-feet-sec <sup>2</sup>	ounce-inch-sec <sup>2</sup>	192.0
Pound-feet-sec <sup>2</sup>	pound-inches <sup>2</sup>	4,633.06
Pound-feet-sec <sup>2</sup>	pound-inch-sec <sup>2</sup> -	12.0

## **Load Conversions**

Present Units	Convert To	Multiply By
Grams	newtons	0.009806
Grams	ounces	0.03528
Grams	pounds	0.002204
Kilograms	pounds	2.2046
Newtons	grams	101.971
Newtons	ounces	3.59692
Newtons	pounds	0.224808
Ounces	grams	28.3495
Ounces	newtons	0.27802
Ounces	pounds	0.0625
Pounds	grams	453.592
Pounds	kilograms	0.45359
Pounds	newtons	4.44824
Pounds	ounces	16.0
Pounds	tons	0.0005
Tons	pounds	2,000.0

## Terms of Sale

#### To Order

Any standard, or custom, product from LINTECH may be ordered by mail, email, on-line, phone, or fax from an Automation Specialist in your area. To obtain the name of your local Automation Specialist call:

# LINTECH®

1845 Enterprise Way Monrovia, CA 91016

Toll Free: (800) 435 - 7494 Phone: (626) 358 - 0110 Fax: (626) 303 - 2035

Web Site: <a href="www.LintechMotion.com">www.LintechMotion.com</a>
E-Mail: <a href="LintechMotion.com">LintechMotion.com</a>

All required options should be reviewed using the part numbering guide for each model series. Your local Automation Specialist or factory personnel can assist you with any questions you may have.

#### **Delivery**

All shipping promises are made in good faith. Any shipping dates appearing on acknowledgments of orders or given to a customer in any other manner are approximate. Where the customer delays in supplying information necessary to proceeding with an order, the date of shipment may be extended accordingly. Standard products from LINTECH are usually available for delivery within 1 to 6 weeks of receipt of a purchase order. However, component shortages, labor disputes, or any other unforeseen circumstance may delay the delivery of an order. LINTECH shall not be held liable under any circumstance. All products are shipped F.O.B. Monrovia, CA. LINTECH packages all standard and custom products carefully. However, LINTECH is not liable for damage incurred during shipment. Contact the carrier immediately if damage to a package or shipment is noticed upon receipt of such shipment.

#### **Payment Terms**

Unless otherwise specified, payment shall be made by C.O.D, credit card (AMEX, Visa, or Master Card), or net thirty (30) days (pending credit approval) from date of shipment of the items purchased hereunder in U.S. currency. LINTECH reserves the right to require deposit payments on non-standard items, customs, or product built to Buyer's designs or specifications. Amounts not timely paid shall bear interest at the rate of 1.5% for each month or a portion thereof that Buyer is late in making payments. No responsibility is assumed by LINTECH for damages arising from delivery delays, fires, strikes, material shortages, accidents, or any other cause whatsoever, and purchase orders are accepted subject only to these conditions irrespective of statements or stipulations on purchase orders.

#### **Minimum Order Amount**

LINTECH requires a minimum of \$30 List Price U.S. currency on all orders.

### Warranty

All LINTECH products are guaranteed to be free from defects in material and workmanship, under normal use, for a period of one year after date of shipment. This warranty covers the repair or replacement of a product when it is sent prepaid to LINTECH. LINTECH does not assume liability for installation, abuse, alteration, insufficient application data provided for a design, or misuse of any positioning system. Products furnished by LINTECH, but not manufactured by LINTECH (motors, gearheads, encoders, amplifiers, etc....), are subject to the manufacturers standard warranty terms and conditions.

#### Returns

Any product requiring a return to LINTECH (for warranty or non-warranty repair) requires pre-approval from the factory prior to shipment. Contact the customer service department at (800) 435-7494 in order to obtain a RMA (Return Materials Authorization) number. At that time, please have your system Model & Serial numbers available, along with the reason for the return. The RMA number should be clearly marked on the returned package label and your packing list, or shipping document. Return product freight prepaid in its original package or one with comparable protection. LINTECH will not accept return shipments sent freight collect. Product damage incurred during return shipment, from poor packaging, will not be warranted by LINTECH. Keeping original packing materials is recommended until initial inspection and testing is completed.

#### **Dimensions and Product Changes**

Published dimensions shown in LINTECH catalogs are known to be accurate at time of printing. LINTECH shall not be held liable, under any circumstances, for any wrongly documented dimension or specification. Changes in design are made whenever LINTECH believes its products will improve by the change. No obligation to incorporate these changes in units manufactured prior to a change will be assumed.

#### **Cancellations**

All items entered for production and on which a cancellation is requested shall be paid for on the basis of actual cost of labor, materials, and supplies applied to the production of such items plus proper overhead expenses determined in accordance with good accounting practice, plus 25% of the total of such cost and expenses; provided that such cost and expense plus 25% shall in no case exceed 100% of the quoted price of original order. Upon cancellation, LINTECH may dispose of materials used in the manufacture of cancelled order as it sees fit.



#### **Mechanical Motion Solutions**

For over 44 years,  $LinTech^{\circ}$  has designed and manufactured numerous standard and custom mechanical motion control products that are used in a wide range of applications and markets. This document highlights cut to length round rail precision shafting, round rail linear bearings (with or without pillow blocks), steel & aluminum shaft supports, shaft assemblies (single &  $TwinRail^{\circ}$ ),  $TwinRail^{\circ}$  carriage assemblies, profile rail linear bearings, rolled & ground ball screw assemblies, acme & ball screw driven actuators, belt driven slides, worm gear driven rotary tables, and a wide range of custom positioning assemblies.



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#### YOUR LOCAL AUTOMATION SPECIALIST: