

RoundWay® Linear Roller Bearings

Designed to withstand extremes of load, speed,
temperature and contamination

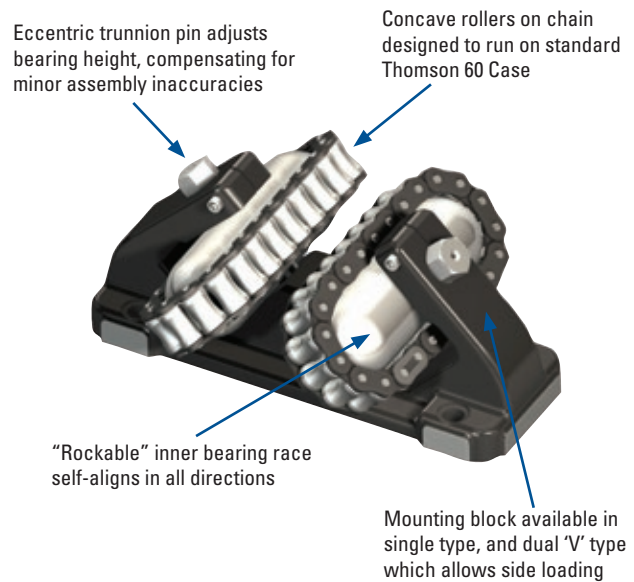


Thomson RoundWay® Linear Roller Bearings

The patented RoundWay Linear Roller Bearing operates on 60 Case® LinearRace shafting, with over 20 times the load capacity of a conventional linear ball bearing. RoundWay has the unique advantage of providing high load capacity without the installation costs typical of Profile Rail products with much greater resistance to environmental contaminants.

- Dynamic Load rating of up to 70,000 lbf (310,800 N)¹
- Velocity up to 100 ft/s (31 m/s)
- Ability to handle exceptionally harsh environmental conditions
 - Extremely contaminant resistant
 - Maximum operating temperature of 500°F (260°C)
- Bearing height infinitely adjustable within up to +/- .030" (+/- .38 mm)¹
- Size range from ½" to 4"
- Replacement parts available to reduce maintenance cost

(1) Applies to 6" RW "V" bearing



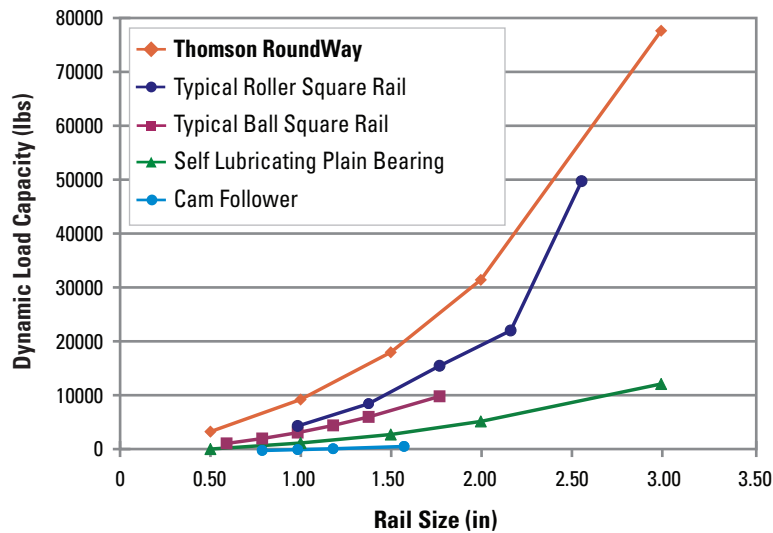
Feature		Advantage	Application Benefits
Concave Rollers	1	Double maximum contact ellipse maximizes load capacity of an anti-friction linear bearing. Can carry loads up to 70,000 lbs per bearing at a 10 million inch L10 rated travel life.	Ideal for extremely high load applications.
Chain-linked Rollers	2	Ability to travel at speeds up to 100ft/s. Conventional linear bearings and guides are limited to top speeds of 10 ft/s.	High speed automation systems - high speed belt drives, rack systems, etc., are no longer limited by the max. speed of linear bearings and guides.
	3	Ability to operate in severely contaminated environments without protective bellows. There are no pockets where debris can accumulate to bind up the bearing.	Open roller assembly is suited for metal removal, paper and wood processing, and granite quarrying. Metal chips, paper flour, wood chips, and abrasive dust would normally destroy conventional linear bearings and guides.
All Steel and Iron Construction	4	Offers: <ul style="list-style-type: none"> • High temperature capacity to 500°F • Rugged use • Increased rigidity. 	Durable in extreme environments.
Circular Inner Race	5	Lateral self-alignment feature provides parallelism forgiveness. Rails for RoundWay bearings may be out of parallel as much as 0.1875". Ball Bushing Bearings require rails to be parallel within 0.0010". Profile Rail products require rails to be parallel within 0.0004".	Ideal for use in gantry systems where it is difficult to maintain 0.001" or better parallelism tolerances over long rail lengths that may be spread far apart.
Eccentric Trunnion Pin	6	Enables: <ul style="list-style-type: none"> • Pitch self-alignment • ± 0.030" height adjustment which can be used to set preload in "locked-in" arrangements. 	<ul style="list-style-type: none"> • Self-alignment enables operation on inaccurate mounting surfaces • Preload benefits applications requiring maximum stiffness and minimal deflection.
Recirculating Ground Roller Assembly	7	Ability to span across gaps in shaft.	Assembly and packaging systems - quicker and more efficient pallet changing is now possible.
	8	Dynamic coefficient of friction of 0.005 and a height tolerance of ±0.003", the equivalent to standard linear bearing tolerances.	Allows for energy efficient, high load and precision linear motion.
	9	Quieter, smoother operation than anti-friction linear bearings and guides. Low capacity nylon balls not necessary.	Minimal noise while still maintaining high load capacity and very low friction.
RoundRail Advantage	10	Round shafts enable bearing to rotate thereby eliminating the potential for induced torsional stresses.	Operates on inaccurate mounting surfaces

RoundWay Load, Speed and Performance Capabilities

The RoundWay's rigid all-steel construction makes it ideal for unforgiving environments

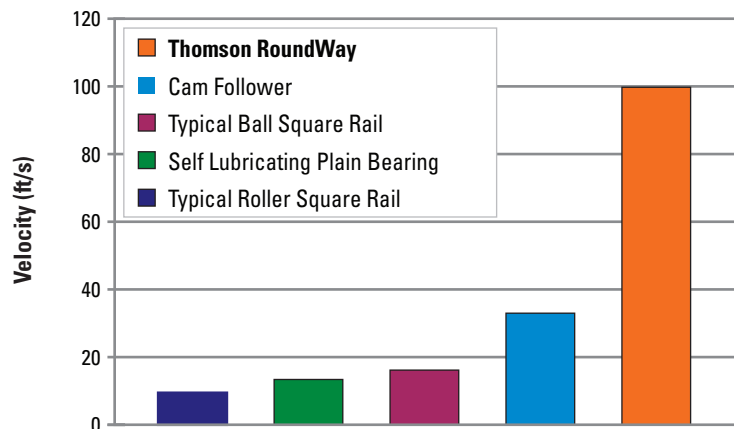
Environment	Cam Follower	Self-Lubricated Plain Bearing	Typical Ball Profile Rail	Thomson RoundWay
Load Capacity	Poor	Good	Very Good	Excellent
Maximum Speed	Good	Fair	Fair	Excellent
Contaminants	Good	Very Good	Fair	Excellent
Impacts/Vibration	Poor	Very Good	Very Good	Excellent
High Temperature	Fair	Very Good	Fair	Excellent

Bearing Dynamic Load Capacity⁽¹⁾



The RoundWay 'V' dynamic load capacity exceeds other bearing technology types

Maximum Bearing Velocity

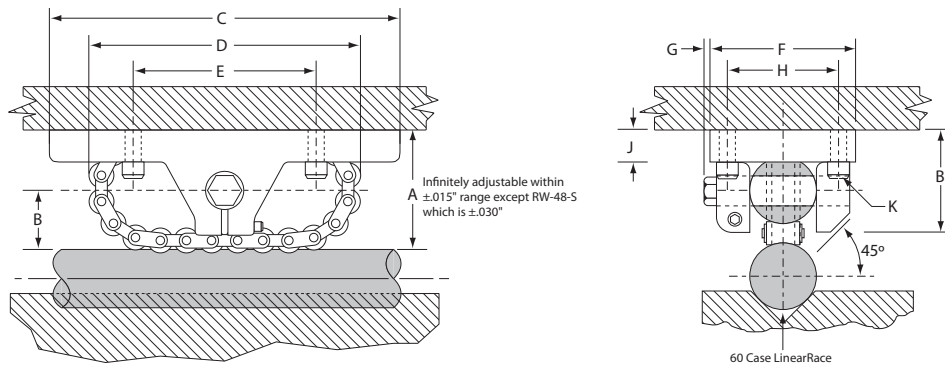


The RoundWay's chain guided rollers allow it to travel at incredibly high speeds – up to almost 70 mph!

(1) As calculated per ISO 14728-1, based on 10 million inches of travel at a speed of 30ft/min



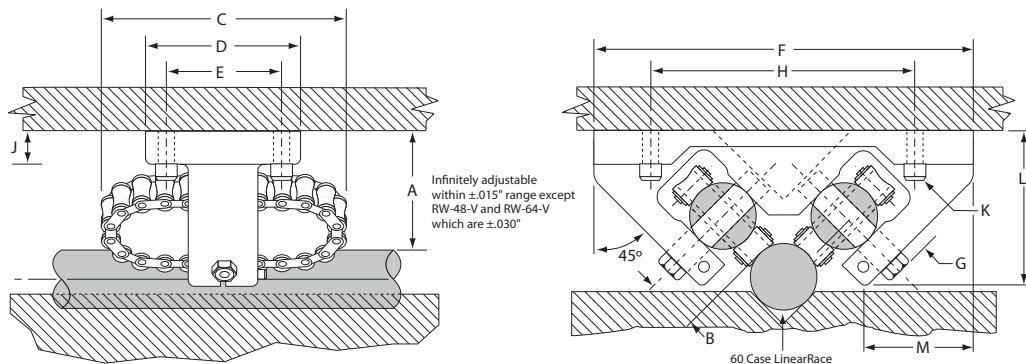
RoundWay Specifications



RoundWay Linear Roller Bearings (Single Type) and 60 Case LinearRace (Dimensions in inches)

Part Number		Nom. Dia.	A	B	C	D	E	F	G	H	J	K		L	Bearing Mass lb	Dynamic ⁽¹⁾ Load Capacity lb _f
RoundWay Bearing	60 Case LinearRace											Bolt	Hole			
RW-8-S	1/2 L PD	.500	1.00	.45	3.0	2.38	1.50	1.25	.19	.94	.31	#6	.16	.88	.50	970
RW-16-S	1 L PD	1.000	1.75	.80	5.0	3.75	2.50	2.13	.25	1.63	.50	#10	.25	1.50	2.20	3020
RW-24-S	1 1/2 L PD	1.500	2.50	1.15	6.5	5.38	3.50	2.88	.31	2.13	.63	.31	.38	2.13	5.60	6020
RW-32-S	2 L PD	2.000	3.25	1.50	8.5	7.38	4.50	3.63	.38	2.75	.75	.38	.44	2.88	12.40	12360
RW-48-S	3 L PD	3.000	5.00	2.30	13.0	11.00	7.00	6.00	.50	4.25	1.25	.63	.69	4.25	48.00	24000

(1) Dynamic Load Capacity is based on 10 million inches of travel.



RoundWay Linear Roller Bearings (Dual Type) and 60 Case LinearRace (Dimensions in inches)

Part Number		Nom. Dia.	A	B	C	D	E	F	G	H	J	K		L	M	Bearing Mass lb	Dynamic ⁽¹⁾ Load Capacity lb _f
RoundWay Bearing	60 Case LinearRace											Bolt	Hole				
RW-8-V	1/2 L PD	.500	1.00	.45	2.38	1.38	1.00	3.00	.19	2.25	.31	#8	.19	1.38	.69	1.10	1370
RW-16-V	1 L PD	1.000	1.75	.80	3.75	2.25	1.63	5.75	.25	4.0	.50	#10	.25	2.38	1.56	4.90	4300
RW-24-V	1 1/2 L PD	1.500	2.50	1.15	5.38	2.75	2.00	7.88	.31	6.0	.63	.31	.38	3.38	2.13	11.70	8600
RW-32-V	2 L PD	2.000	3.25	1.50	7.38	3.50	2.50	9.75	.38	7.5	.75	.38	.44	4.38	2.50	25.20	17500
RW-48-V	3 L PD	3.000	5.00	2.30	11.00	5.50	4.00	15.50	.63	12.00	1.25	.63	.69	7.00	4.25	90.00	35000
RW-64-V	4 L PD	4.000	6.50	3.00	14.88	7.00	5.00	19.25	.75	15.00	1.50	.75	.81	8.63	5.00	193.00	70000

(1) Dynamic Load Capacity is based on 10 million inches of travel.

RoundWay Linear Bearings Used Across Numerous Industries:

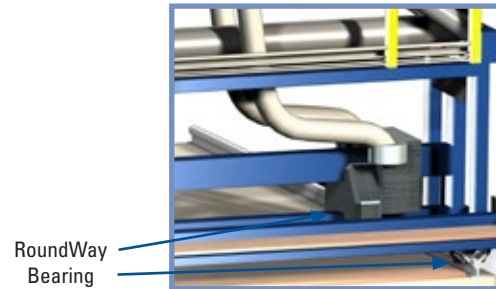


Steel Processing
Heavy Assembly
Refineries
Woodworking



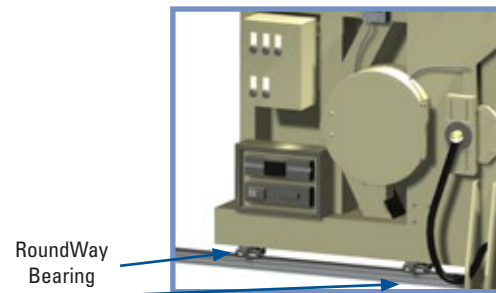
Application: Fiberglass Saw

- Designed using (4) Roundway 32V bearings benefits:
 - High load capacity – 2 ton load
 - High contamination resistance – fiberglass particles
 - Minimal installation time - 60 Case LinearRace shafting can be mounted slightly out or parallel, eliminating the need for costly alignment procedures



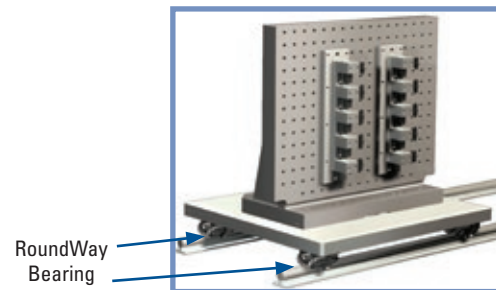
Application: UV Curing System

- Designed using (4) Roundway 32V bearings benefits:
 - High load capacity - 8 ton load
 - High contamination resistance – rubber dust
 - Minimal replacement costs – Roundway bearing components can be replaced without replacing bearing mount



Application: Machining Pallet Transfer

- Designed using (4) RoundWay 24V bearings benefits
 - Long life – bearings in operation for 14 years without replacement
 - Bearing spans .080" gap between shafting in part loading area and transfer station



Let Thomson help define the optimal linear motion solution for your application. We offer the broadest range of linear guides and components including Linear Ball Bushing® Bearings, Profile Rail Bearings, RoundWay Bearings and complete linear motion systems.





Notes

Notes

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