



**Load  
Runners®**

**HEAVY-DUTY  
IDLER ROLLER &  
RAIL SOLUTIONS**



## GLOBAL REACH. LOCAL SUPPORT.

Osborn designed the world's first non-needle roller bearing idler roller more than fifty years ago to solve an internal manufacturing challenge on the company's foundry equipment. Today, Load Runners is the world's leading idler-roller and rail solution, used in numerous industries from healthcare and primary metals to automotive and general industry.

Osborn is the global leader in surface treatment and finishing solutions, with more patents on products and processes than all other brush companies combined. Established in 1887 in Cleveland, Ohio, U.S.A., Osborn's innovative culture has produced numerous industry firsts --- including Load Runners® brand precision load-handling systems.

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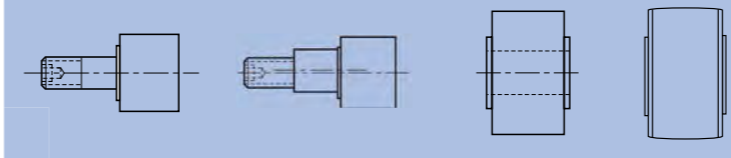
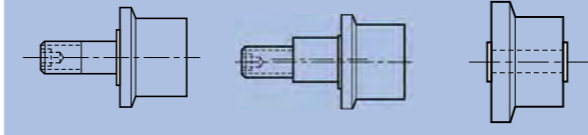
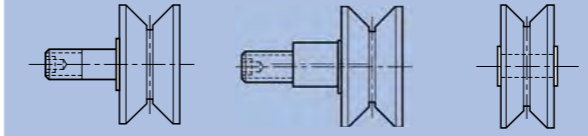

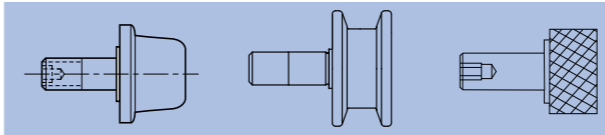
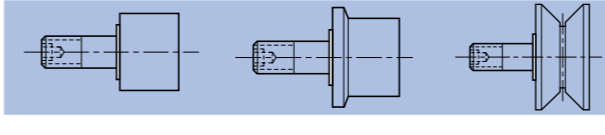
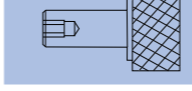

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**Choosing the right idler roller and rail solution for your application can make or break your bottom line.**

Often the "unsung hero" in the application, idler rollers play a significant role in the overall success of any rail-riding operation. Properly specified, idler rollers optimize line speed and product handling, regardless of material run or machinery used.

If you're involved with product selection, operating parameters, or sourcing, contact the Osborn team for support throughout the entire design/specification/sourcing process.

**Application Considerations:**

The proper selection and application of power transmission products and components, including the related area of product safety, is the responsibility of the customer. Operating and performance requirements and potential associated issues will vary appreciably depending on the use and application of such products or components.

The scope of the technical and application data included in this publication is necessarily limited. Unusual operating environments and conditions, lubrication requirements, loading supports, and other factors can materially affect the application and operating results of the products and components, and the customer should carefully review its requirements.

Any technical support, advice or review provided by Osborn and its divisions with respect to the use of products and components is given in good faith and without charge, and Osborn assumes no obligation or liability for the advice given, or results obtained, all such advice and review being given and accepted at customer's risk.

**What is the application environment?**

Environmental conditions can impact the life and performance of load bearing roller assemblies. Applications with exposure to one or more of the following operating environments may require special consideration:



**Terms and Conditions:**

For a copy of Osborn's standard terms and conditions of sale, disclaimers of warranty, limitations of liability and remedy, please contact Osborn customer care. These terms and conditions of sales, disclaimers, and limitations of liability and remedy, apply to any person who may buy, acquire, or use Osborn (Load Runners, Cam Runners or Load Rail) referred to herein, including any person who buys from a licensed distributor of Osborn products.

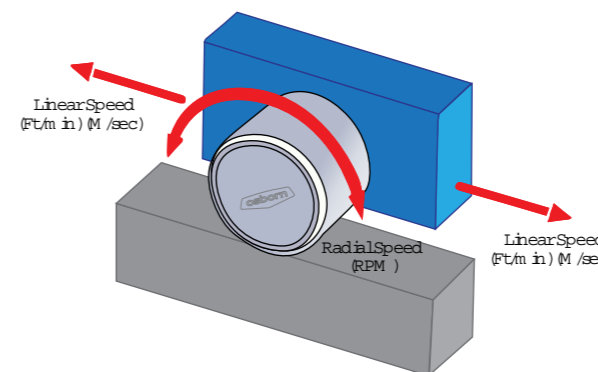
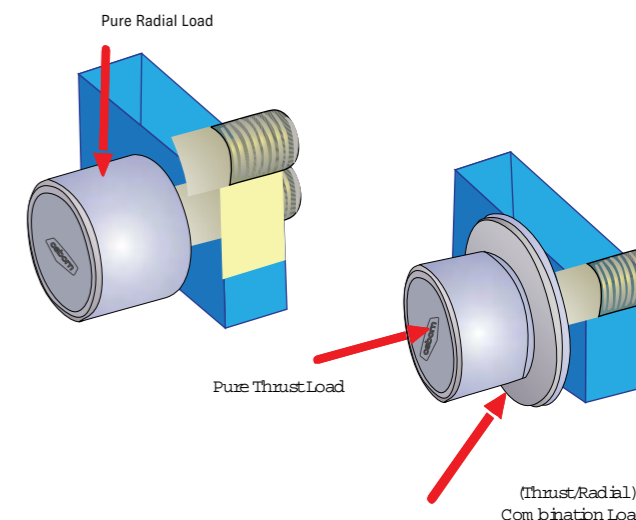
**WHAT'S YOUR Challenge?**

Load bearing roller assemblies are designed to support moving (dynamic) loads or stationary (static) loads. The load that the rollers will be supporting can be communicated using the following terminology:

**Radial Load:** Load applied to 90 degrees with the bearing bore or axis of rotation.

**Thrust Load:** Load applied parallel with the bearing bore or axis of rotation.

Rollers in many applications experience a load comprised of radial and thrust load which can be referred to as **combination load**. This load may not be intentionally designed into the application, but a combination load can be created as a result of misalignment or other functions within the application.

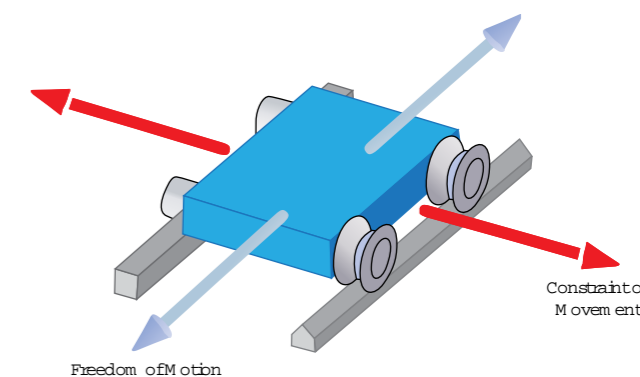


**What are the applied speeds?**

The rate at which the moving object will be travelling can be communicated in two different ways, in distance per time (FPM, M/sec) for linear movement or in revolutions per minute (RPM) for rotational movement. Depending on the type of application, one of these will best communicate the applied speed.

**What are the needs for location?**

Load bearing roller assemblies facilitate the location of moving loads or the contact surface by allowing for specific movements and by limiting unwanted ones. Applications must be reviewed to determine the required **freedom of motion** and desired **constraint of movement**.





# WE ARE Load Runners

## Load Runners Load Guidance Systems for Precision Handling of Heavy Loads in Tough Environments

When reliability is paramount, combine the high capacity of Load Runners idler-rollers with long-lasting, rugged Load Rails®, to move your products, people, or process from Point A to Point B.

### Designed To Endure Extreme Operating Conditions

Load Runners' treads are machined from high-alloy steel, then case hardened (Rc 55-60) for a wear-resistant outer shell and tough inner core.

Precision tapered roller bearings (larger sizes) and deep-groove ball bearings withstand heavy radial and thrust loads.

All Load Runners are tightly sealed and lubricated for life to withstand dirt, sand and moisture.

High-shear-strength studs feature a hex socket for easy installation, and thru-shafts eliminate the need for customer fabrication.

- Standard styles: plain, v-grooved, flanged, crowned, double-flanged, and flanged crown.
- Handle both radial and thrust loads
- Case hardened to Rc 55-60
- Lubricated and sealed for life
- Matching precision Load Rails hardened to Rc 60-65
- In-stock availability or short lead-time custom designs
- Backed by a professional, technical inside team



# CUSTOM Engineered

In addition to the standard Load Runners idler-rollers listed in this catalog, custom tread profiles, studs and special features are available. A few examples include:

- Stainless steel treads, studs
- Special plating (zinc, chrome etc.)
- Non-metallic tread materials (urethane, nylon, etc.)
- Special seals
- Special lubricants
- Provision for re-lubrication
- Crowned profiles
- Solid lubricants
- Double-flange rollers

Consult Osborn with special features or requirements not listed.

### Operation in Severe Environments

#### Temperature Extremes

Standard Load Runners idler-rollers are designed to operate in temperatures ranging from -30° F to +225° F (-34° C to +107° C).

Operation in extreme temperature environments as low as -40°F (-40°C) and as high as +325°F (+162°C) continuously requires special seals and/or lubrication provisions.

#### Moisture Extremes

Operation in wash-down or similar extreme-moisture environments may also require special lubrication provisions.

Consult Osborn for application assistance.

### Bearing Disassembly (If Required)

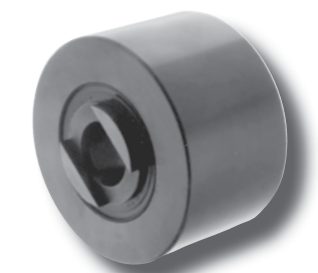
Tapered-roller-bearing assemblies used in Load Runners idler-rollers are pre-set with custom-ground spacers for the correct running clearance. If a bearing assembly is removed and then reassembled, the same cups, cones and spacers must be used.

Bearing assembly components cannot be mixed and matched. Even new cups or cones cannot be substituted in an existing assembly.

**Osborn does not recommend disassembly and does not provide separate component parts.**

### Application Considerations

The customer assumes responsibility for proper selection and application of Osborn Load Runners, Cam Runners and Load Rails. Technical advice or review provided by Osborn with respect to the use of Osborn products is given in good faith and without charge, and Osborn assumes no obligation of liability for the advice given. Advice provided is to be accepted at the customer's risk.



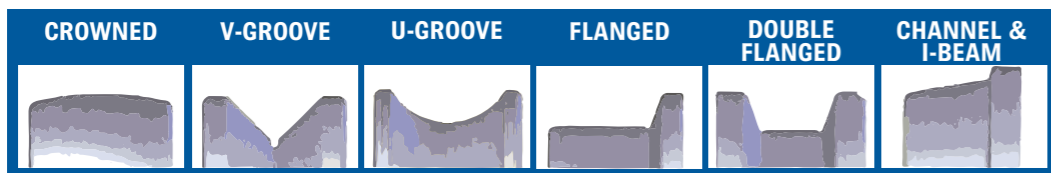


# HIGHLY ENGINEERED Highly Regarded

## Every Application Has Its Own Unique Requirements

Engineering expertise and manufacturing skills are what set the Load Runners brand apart. We collaborate with customers across the globe to solve their unique load-handling challenges all with one common goal: achieving optimum results. Before recommending a custom solution, we consider many specific attributes: moisture extremes, temperature, speed, loads, lubrication requirements, operating environment, and cycle counts.

In addition to thousands of standard products sold in more than 120 countries, Osborn offers local technical and customer support that's just a phone call/email away. No matter where you or your customers are located, you'll always have access to Osborn's application expertise and the industry's leading idler-roller/rail design and support team.



## Superior Design Means Longer Life. Longer Life Means Lower Costs.

Osborn Load Runners are robust assemblies of carefully fabricated outer shells/treads and precision bearings fitted to high tolerance shafts. All Osborn Load Runners match the tread, shaft and bearings into a cohesive, highly engineered unit used in dozens of industries and hundreds of applications.

Manufactured in the USA, Load Runners feature heat-treated specialty steel, precision bearings, a maintenance-free lubrication and seal system, and a global network of sales support and application engineering expertise.

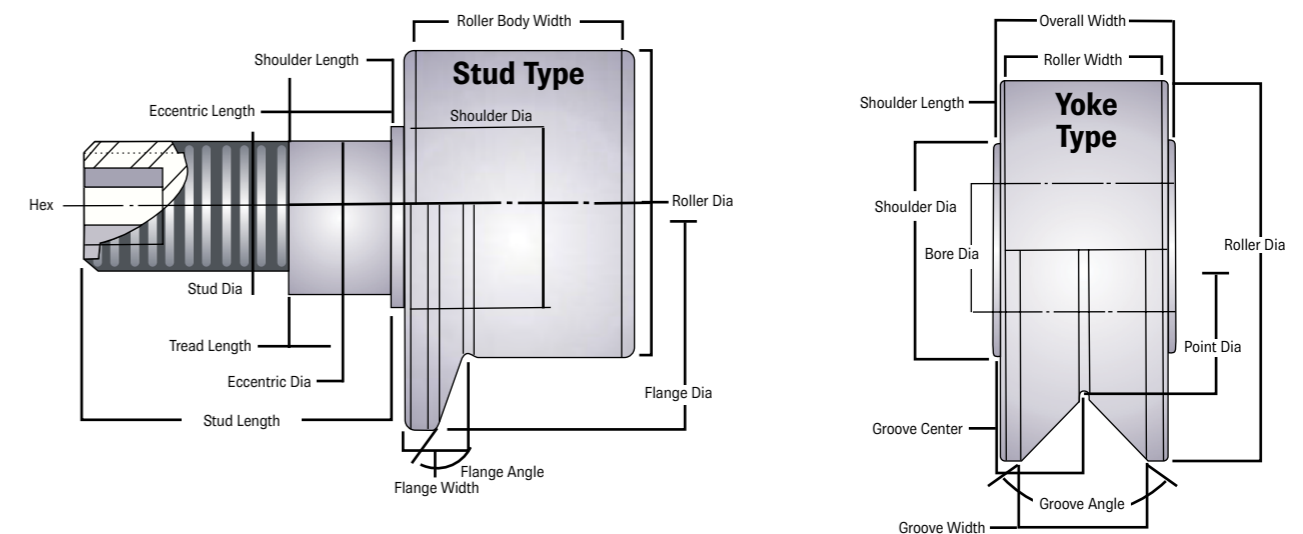
Osborn Load Runners are designed and manufactured using exacting engineering principles with an emphasis on achieving:

- Better balance
- Increased bearing life
- Less tread/outer shell wear
- Reduced power consumption
- Smooth performance
- Quieter operation

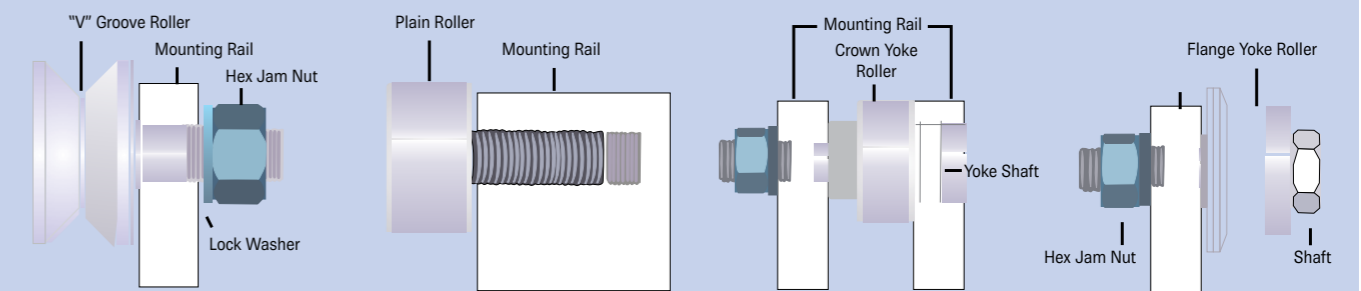
## We Keep Things Moving

Osborn Load Runners are the ultimate heavy-duty load rail and idler roller solution in the industry, providing precision performance across numerous applications. Available in all standard configurations -- either metric or inch, stud- or yoke-style -- ranging in rolling sizes up to 12 inches, Load Runners help reduce your design time and lower overall material handling system costs.

Our design engineers provide custom solutions to handle any challenge.

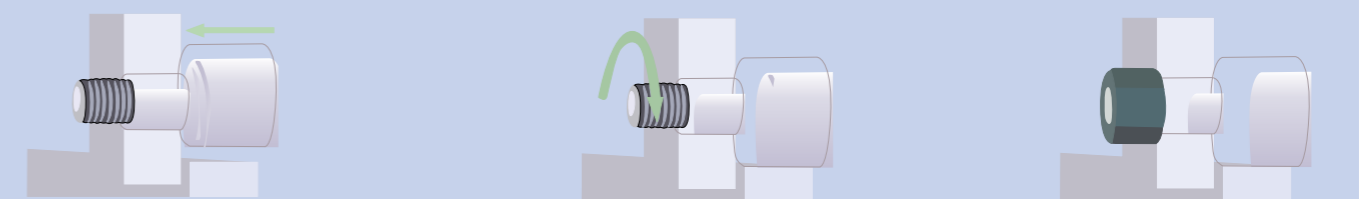


Rollers are manufactured to accommodate multiple mounting arrangements. The two most common mounting arrangements are stud-type and yoke-type:



**Through-Hole Mount Stud Type**      **Blind Mount Stud Type**      **Captured Mount Yoke Type**      **Through-Hole Mount Yoke Type**

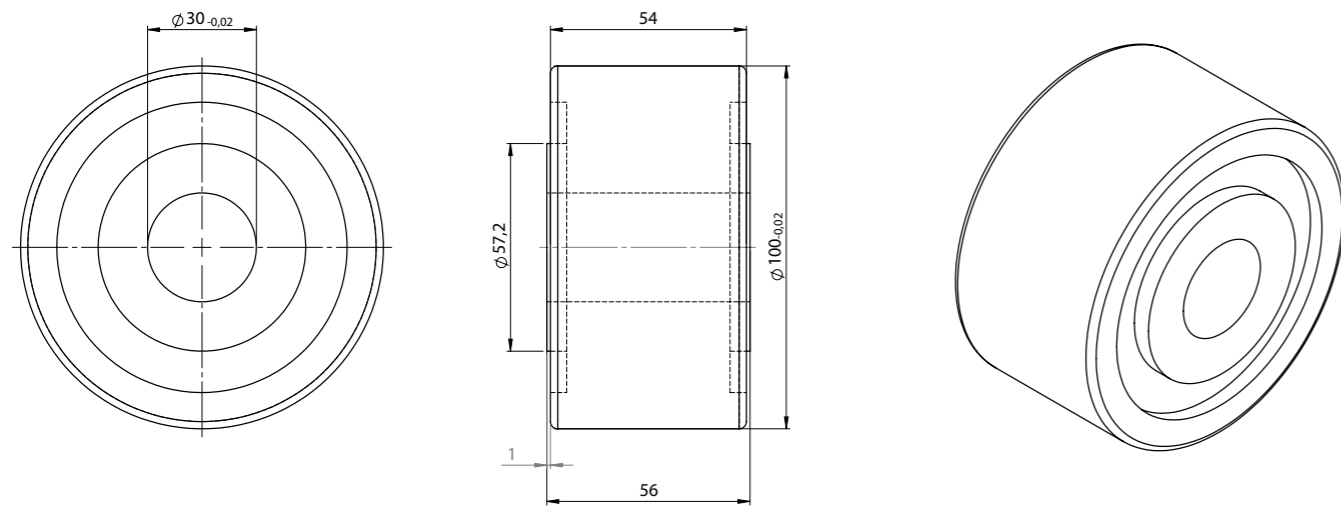
For applications requiring precision alignment between a roller and contact surface, an eccentric style roller may be used to achieve uniform contact.



**1. Mount**      **2. Adjust**      **3. Fasten**

# 2D drawings 3D models

Available for easy incorporation into your designs



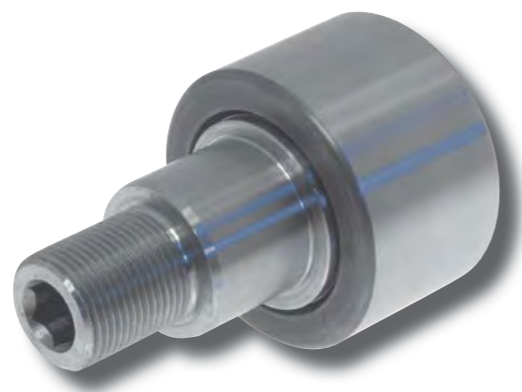
## INDUSTRY SPOTLIGHT

### Primary Metals

# TOUGH ENVIRONMENTS REQUIRE TOUGH PRODUCTS...

A steel mill was experiencing premature bearing failure that it suspected was a lubrication problem. After nearly two years of frequently replacing bearings, the company called Osborn.

Once on-site, the Osborn field sales engineer confirmed a lubrication problem, but also identified a more urgent problem...the customer was using undersized rollers. Compounding the problem, the application included significant shock loads that were damaging the bearings almost immediately upon installation. After solving the shock load issue, Osborn configured a completely new solution with beefier, case-hardened eccentric Load Runners and used proprietary high-temperature lubrication. Before the change, the old cam followers were lasting less than two months. The mill's new Load Runners have been in service more than six months and they're still going strong.



### Other related applications

- Foundries
- Mould Handling Equipment
- Steel Mills
- Coil Conveying Systems
- Heat Treat Furnaces
- Recycling Scrap Yards
- Shredders
- Aluminum and Copper Plants



# RELIABILITY THROUGH PROPER ALIGNMENT...

A customer in an oilfield was experiencing an ongoing misalignment problem with their cam follower and rail system. After several failed attempts to re-align the rails on their own, they called Osborn.

The problem they faced is fairly common -- parallel rails with extended runs using plain cam followers and rail exclusively has a tendency to misalign. The solution was rather straight-forward: Osborn engineers specified v-groove cam followers and rail on one side, and plain cam followers and rail on the other. This new, dual configuration provided the additional "wiggle room" needed to help maintain system tolerances, and prevent premature failure. Best yet, as stock product, the replacement rails and Load Runners were delivered, installed, and performing flawlessly just two weeks after the order was placed.



## Other related applications

- Coiled Tubing
- Injection Systems
- Power Tongs
- Fracking





# KEEPING ASSEMBLY ON TRACK...

Load Runners are used on conveyor and handling systems in assembly plants and cylinder-actuated carriages on equipment, such as paint operations, sub-assemblies, automated storage and retrieval systems. High levels of weld spray and dirt combined with fluctuating ambient temperatures can spell disaster for idler rollers. Not only are Load Runners up to the operating environment, but they are designed to handle both high loads and speeds. Best yet, all Load Runners are tightly sealed and lubricated for life.



### Other related applications

- Assembly and Paint Line Conveying Systems
- Automated Storage and Retrieval
- Robotic Welders



## INDUSTRY SPOTLIGHT

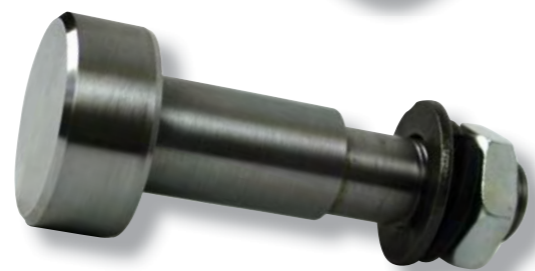
### Off-Highway Equipment: Agriculture, Construction, and Mining

# KEEP YOUR MACHINE RUNNING STRONG...

...with Osborn Load Runners and Load Rails.

Osborn Load Runners have proven themselves in machines from sugar cane harvesters to haulage trucks, all manufactured by such companies as Caterpillar, Case, Komatsu, International, Liebherr, John Deere, Dresser, etc.

Approximately 20 percent of any off-road heavy machinery's purchase price is contained in the undercarriage. More importantly, nearly 50 percent of maintenance costs will go into maintaining it. We know that one weak link in a system can cause a problem. That's why many undercarriage systems are integrally designed using Load Runners and Load Rails®. Osborn engineers work with your design team so that all components are carefully matched in a performance profile (tolerance, strength, hardness, and wear limits) for optimum performance and product life cycle. Although wear can never be eliminated, you can prolong the wear life of components and minimize maintenance costs with the properly designed idler roller and rail solution.



#### Other related industries

- Construction
- Mining
- Pulp and Paper
- Sawmills

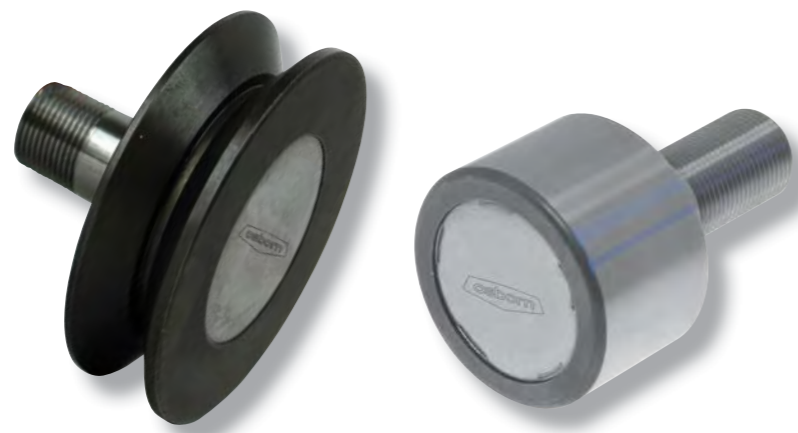


# STUCK BETWEEN A ROCK & A HARD PLACE...

A large aggregate supplier was having premature cam follower bearing failure at the end of its heavy-duty material handling line. Loose material was falling onto the rails and repeatedly jamming the treads, causing excess heat and breach of seal integrity.

Osborn analyzed the application and changed out the quarry's rail and cam followers to a stock Load Runners V-groove configuration. The improvement over the previous solution was immediate and dramatic.

The resulting product performance was measured at more than five times that of the previous plain cam follower and rail combination. The company's investment in Load Runners translated into less downtime and increased productivity.



### Other related applications

- Cement
- Concrete Batch Feeding Systems
- Hot Clinker Apron Conveyor
- Sand and Gravel
- Telescoping Conveyors and Stackers
- Screening Systems
- Coal
- Feeders, Hoppers, Bins and Gates



# DESIGNED BY ENGINEERS FOR ENGINEERS...

Load Runners and Load Rails are proven performers in some of the world's most challenging applications. Through collaborative and visionary engineering on some of the world's large moveable structures, Load Runners have become the workhorse of the kinetic architecture world. Strong and sturdy, Osborn's heavy-duty, custom solutions have powered kinetic architectural projects across the globe with challenging load cases, including operable roofs from 80'–200' and operable walls as tall as 139'.

Featuring tapered roller bearings, Load Runners heavy-duty idler roller bearings handle both heavy radial as well as thrust loads. Maintenance-free units are lubed for life with seals to keep out sand, moisture, and other contaminants. Load Runners are manufactured in either inch or metric dimensions in virtually limitless geometries and tread configurations. Typical tread profiles are plain, flanged, or V-grooved.

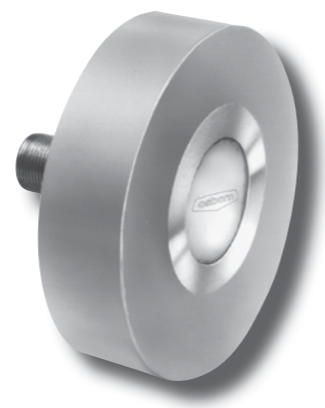
#### **Important Note For All Designers and Engineers:**

*To ensure any product selection performed provides the end users with the lowest total cost of ownership, we have provided a design submission sheet, located on page 90/91 of this catalog. This selection process may result in some dimensions of the selected product(s) differing from those stated in this catalog or on [loadrunners.com](http://loadrunners.com).*

*In the interest of product development, Osborn reserves the right to change critical data at any time without prior notice. Dimensions shown are nominal only. Certified drawings are available upon request.*

#### **Other related applications**

- Wall Units
- Set Design
- Retractable Doors / Ceilings
- Bridges, Gangways
- Satellite Dish / Telescope Positioning



# PEAS & GREASE DON'T MIX...

From low-speed, quiet applications (for patient comfort) on medical equipment to high-speed, reliable, and maintenance-free pharmaceutical and packaging applications.

Osborn Idler Rollers can be engineered to meet the diverse conditions that are required in this ever expanding industry.



## Other related applications

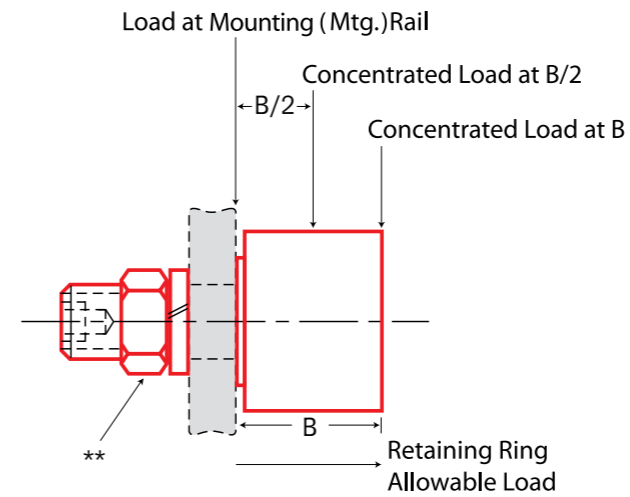
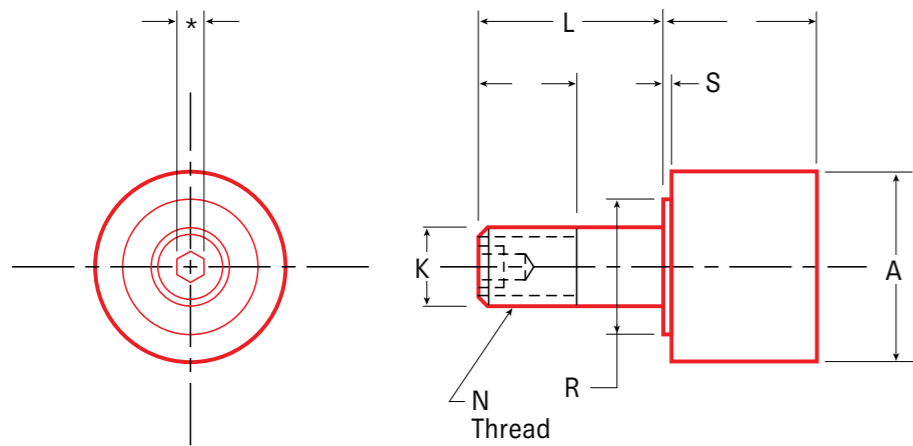
- Bakery Cooling Towers
- Drug Packaging Conveyors
- Can Processing Equipment
- MRI Machines
- Bottle-Filling Machines





# LOAD RUNNERS

## Plain - Concentric Stud Style - Metric Sizes (mm)



Part No.	Item No.	A		K	L	M	N	R	S	Rec. Mtg. Hole Size	Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (N)			Bearing Capacity, Static Thrust (N)	Stud Capacity (N)		Retaining Ring Capacity (N)	Approx Weight (kg)	Part No.	
		Roller Dia	Roller Width									3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit		Bending=0.75 Sy					Shear=0.75 x 0.5 x Sy
		+0.00 -0.02		+0.00 -0.02			Bend @ B/2	Bend @ B													
HPC-26	97374	26	20	10	23	13	M10x1	13.1	0.8	10.02	BB	1070	2790	1000	620	2120	910	8780	1700	-	HPC-26
HPC-30	97375	30	20	12	25	14	M12x1.5	15.9	0.8	12.02	BB	1070	2790	1000	620	2120	910	8780	1700	0.11	HPC-30
HPC-32	97376	32	22	12	25	14	M12x1.5	15.9	0.8	12.02	BB	2300	6010	2690	1660	3820	1690	14450	2090	0.14	HPC-32
HPC-35	97377	35	22	16	32.5	18	M16x1.5	19.1	0.8	16.02	BB	2300	6010	2690	1660	3790	1690	14450	2090	0.17	HPC-35
HPC-40	95064	40	30	14	40	26	M14x2	18	1.6	14.02	BB	4680	12260	4900	3030	6170	2890	25690	2090	0.27	HPC-40
HPC-40-1	95063	40	27.6	18	36.5	19	M18x1.5	22	1.6	18.02	BB	4680	12260	4900	3030	6330	3060	25690	2090	0.24	HPC-40-1
HPC-47	95065	47	27.6	20	40.5	21	M20x1.5	25.5	1.6	20.02	BB	4680	12260	4900	3030	6330	3060	25690	2090	0.42	HPC-47
HPC-50	95068	50	40	16	50	35	M16x2	23	1.6	16.02	BB	6490	17020	7210	4450	8810	4570	45760	4050	0.54	HPC-50
HPC-52	95066	52	33.6	20	40.5	21	M20x1.5	25.5	1.6	20.02	BB	6490	17020	7210	4450	14430	7030	51600	4050	0.54	HPC-52
HPC-62	95070	62	44	24	58	35	M24x3	32	1.6	24.02	BB	8810	23080	10090	6230	16090	7650	64850	5960	1.04	HPC-62
HPC-62-1	95069	62	44	24	49.5	25	M24x1.5	32	1.6	24.02	BB	8810	23080	10090	6230	16070	7650	64850	5960	1.04	HPC-62-1
HPC-72	95072	72	44	24	49.5	25	M24x1.5	32	1.6	24.02	TRB	20330	48390	33940	20330	26410	13840	102960	N/A	1.4	HPC-72
HPC-76	95074	76	52	30	69.5	40	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	45000	23170	160800	N/A	1.91	HPC-76
HPC-80	95075	80	52	30	69.5	40	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	45000	23170	160800	N/A	2.07	HPC-80
HPC-85	95076	85	52	30	69.5	40	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	45000	23170	160800	N/A	2.37	HPC-85
HPC-90	95077	90	52	30	69.5	40	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	45000	23170	160800	N/A	2.65	HPC-90
HPC-100	95079	100	52	30	80	50	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	45000	23170	160800	N/A	3.33	HPC-100
HPC-100-1	95078	100	52	30	69.5	40	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	45000	23170	160800	N/A	3.15	HPC-100-1
HPC-125	95080	125	76	48	105	60	M48x5	82.5	1.6	48.02	TRB	62210	148070	230860	144570	128100	65120	411830	N/A	8.48	HPC-125
HPC-150	95081	150	76	64	140	82	M64x6	82.5	1.6	64.02	TRB	66990	159430	250880	147240	301500	153930	731550	N/A	12.5	HPC-150
HPC-200	95082	200	76	64	140	82	M64x6	82.5	1.6	64.02	TRB	66990	159430	250880	147240	301500	153930	731550	N/A	21.87	HPC-200

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

\*\*Lock washer and jam nut available, for size see N dimension.

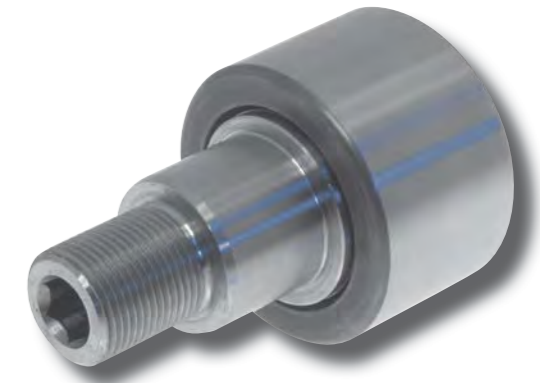
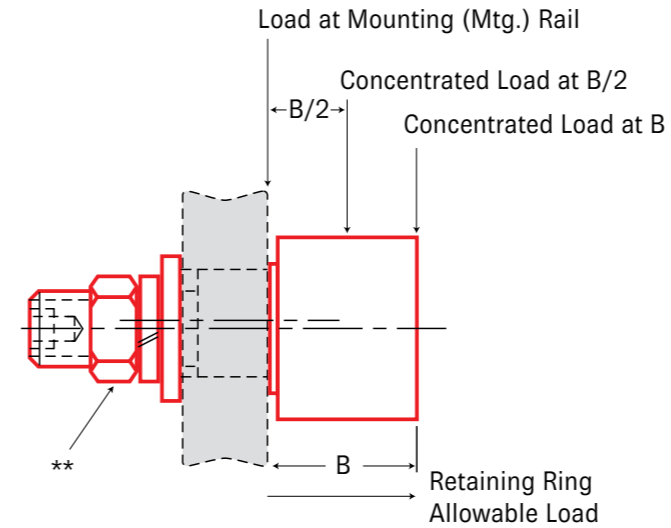
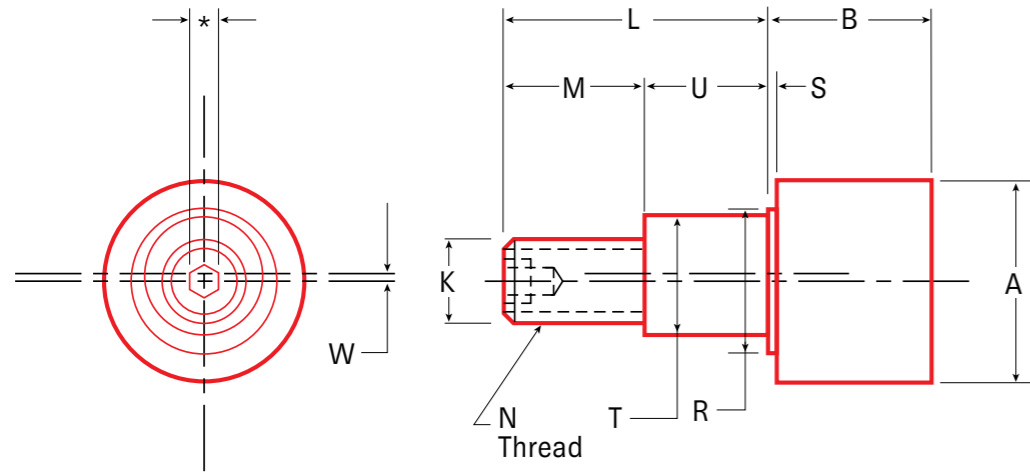
For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Plain - Eccentric Stud Style - Metric Sizes (mm)



Part No.	Item No.	A		K	L	M	N	R	S	T	U	W	Rec. Mtg. Hole Size	Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (N)			Bearing Capacity, Static Thrust (N)	Stud Capacity (N)		Retaining Ring Capacity (N)	Approx Weight (kg)	Part No.	
		Roller Dia	Roller Width												3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit		Bending=0.75 Sy					
		+0.00 -0.02																	Bend @ B/2	Bend @ B				
HPCE-26	97378	26	20	10	23	13	M10x1	17.1	0.8	13	10	0.5	13.02	BB	1070	2790	1000	620	2120	910	8780	1700	0.11	HPCE-26
HPCE-30	97379	30	20	12	25	14	M12x1.5	17.5	0.8	15	11	0.5	15.02	BB	1070	2790	1000	620	2020	890	8780	1700	0.14	HPCE-30
HPCE-32	97380	32	22	12	25	14	M12x1.5	17.5	0.8	15	11	0.5	15.02	BB	2300	6010	2690	1660	3820	1690	14450	2090	0.17	HPCE-32
HPCE-35	97381	35	22	16	32.5	18	M16x1.5	23.8	0.8	20	14.5	1	20.02	BB	2300	6010	2690	1660	3790	1690	14450	2090	0.2	HPCE-35
HPCE-40-1	95833	40	27.6	18	36.5	20.5	M18x1.5	28.5	1.6	22	16	1	22.02	BB	4680	12260	4900	3030	6330	3060	25690	2090	0.29	HPCE-40-1
HPCE-47	95835	47	27.6	20	40.5	22.5	M20x1.5	32	1.6	24	18	1	24.02	BB	4680	12260	4900	3030	6330	3060	25690	2090	0.45	HPCE-47
HPCE-50	95837	50	40	16	50	32	M16x2	32	1.6	24	18	1	24.02	BB	6490	17020	7210	4450	17700	6930	51600	4050	0.69	HPCE-50
HPCE-52	95836	52	33.6	20	40.5	22.5	M20x1.5	32	1.6	24	18	1	24.02	BB	6490	17020	7210	4450	14420	7030	51600	4050	0.72	HPCE-52
HPCE-62	95839	62	44	24	58	38	M24x3	43	1.6	28	20	1.5	28.02	BB	8810	23080	10090	6230	16070	7030	64850	5960	1.10	HPCE-62
HPCE-62-1	95838	62	44	24	49.5	27.5	M24x1.5	43	1.6	28	22	1	28.02	BB	8810	23080	10090	6230	16070	7650	64850	5960	1.08	HPCE-62-1
HPCE-72	95840	72	44	20	49.5	27.5	M20x1.5	38	1.6	28	22	1	28.02	TRB	20330	48390	33940	20330	15710	7650	71590	N/A	1.60	HPCE-72
HPCE-76-1	95841	76	52	24	70	41	M24x1.5	50	1.6	35	29	1.5	35.02	TRB	26670	63480	88960	53380	22980	8130	102740	N/A	1.99	HPCE-76-1
HPCE-80	95843	80	52	24	70	41	M24x1.5	50	1.6	35	29	1.5	35.02	TRB	26670	63480	88960	53380	22980	11830	102740	N/A	2.39	HPCE-80
HPCE-85	95844	85	52	24	70	41	M24x1.5	50	1.6	35	29	1.5	35.02	TRB	26670	63480	88960	53380	22980	11830	102740	N/A	2.54	HPCE-85
HPCE-90	95845	90	52	24	70	41	M24x1.5	50	1.6	35	29	1.5	35.02	TRB	26670	63480	88960	53380	22980	11830	102740	N/A	2.98	HPCE-90
HPCE-100	95846	100	52	24	70	41	M24x1.5	50	1.6	35	29	1.5	35.02	TRB	26670	63480	88960	53380	22980	11830	102740	N/A	3.29	HPCE-100
HPCE-125	95847	125	76	48	105	55	M48x5	82.5	1.6	64	50	1.5	64.02	TRB	62210	148070	230860	144570	128100	65120	411830	N/A	4.63	HPCE-125
HPCE-150	95848	150	76	64	140	75	M64x6	82.5	1.6	80	65	1.5	80.02	TRB	66990	159430	250880	147240	301500	159930	731550	N/A	5.56	HPCE-150

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

\*\*Lock washer and jam nut available, for size see N dimension.

For special features and custom design considerations, see page 7.

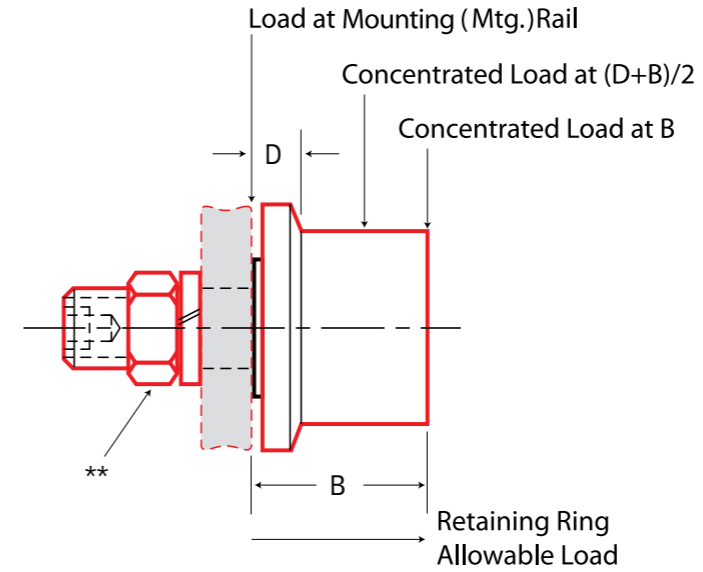
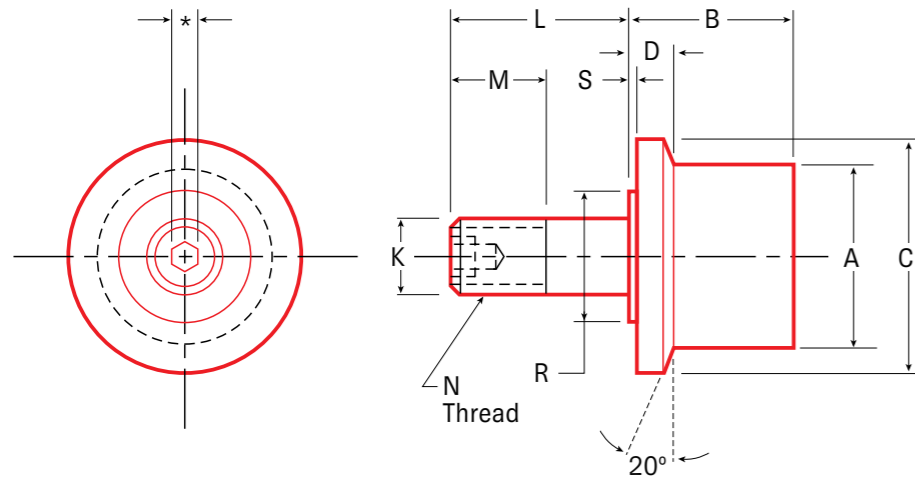
LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

1 kg = 9,81 N = 2,21 lbs



# LOAD RUNNERS

## Flanged - Concentric Stud Style - Metric Sizes (mm)



Part No.	Item No.	A	B	C	D	K	L	M	N	R	S	Rec. Mtg. Hole Size	Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (N)			Bearing Capacity, Static Thrust (N)	Stud Capacity (N)			Retaining Ring Capacity (N)	Approx Weight (kg)	Part No.
		Roller Dia	Roller Width	Flange Dia	Flange Thickness	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length			3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit		Bending=0.75 Sy		Shear=0.75 x 0.5 x Sy			
						+0.00 -0.02										Bend @ (D+B)/2		Bend @ B					
HPJ-26	97382	26	20	35	5	10	23	13	M10x1	13.1	0.8	10.02	BB	1070	2790	1000	620	1630	910	8780	1700	0.11	HPJ-26
HPJ-30	97383	30	20	40	5	12	25	14	M12x1.5	15.9	0.8	12.02	BB	1070	2790	1000	620	1680	910	8780	1700	0.14	HPJ-30
HPJ-32	97384	32	22	42	5	12	25	14	M12x1.5	15.9	0.8	12.02	BB	2300	6010	2690	1660	3140	1690	14450	2090	0.17	HPJ-32
HPJ-35	97385	35	22	46	5	16	32.5	18	M16x1.5	19.1	0.8	16.02	BB	2300	6010	2690	1660	3120	1690	14450	2090	0.2	HPJ-35
HPJ-40	95410	40	30	54	8.8	14	40	26	M14x2	18	1.6	14.02	BB	4680	12260	4900	3030	4890	2890	25690	2090	0.33	HPJ-40
HPJ-40-1	95409	40	27.6	54	7.8	18	36.5	19	M18x1.5	22	1.6	18.02	BB	4680	12260	4900	3030	5040	3060	25690	2090	0.24	HPJ-40-1
HPJ-47	95411	47	27.6	61	7.8	20	40.5	21	M20x1.5	25.5	1.6	20.02	BB	4680	12260	4900	3030	5040	3060	25690	2090	0.47	HPJ-47
HPJ-50	95415	50	40	68	14	16	50	35	M16x2	23	1.6	16.02	BB	6490	17020	7210	4450	6860	4570	45760	4050	0.7	HPJ-50
HPJ-52	95413	52	33.6	66	10.8	20	40.5	21	M20x1.5	25.5	1.6	20.02	BB	6490	17020	7210	4450	11080	7030	51600	4050	0.83	HPJ-52
HPJ-62	95420	62	44	78	14	24	58	35	M24x3	32	1.6	24.02	BB	8810	23080	10090	6230	12340	7650	64850	5960	1.21	HPJ-62
HPJ-62-2	95418	62	44	78	14	24	49.5	25	M24x1.5	32	1.6	24.02	BB	8810	23080	10090	6230	12340	7650	64850	5960	1.21	HPJ-62-2
HPJ-72	95422	72	44	90	14	24	49.5	25	M24x1.5	32	1.6	24.02	TRB	20330	48390	33940	20330	21390	14030	102960	N/A	1.28	HPJ-72
HPJ-76	95427	76	52	98	14	30	69.5	40	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	36890	23150	160800	N/A	2.17	HPJ-76
HPJ-80	95429	80	52	102	14	30	69.5	40	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	36890	23150	160800	N/A	2.41	HPJ-80
HPJ-85	95430	85	52	107	14	30	69.5	40	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	36890	23150	160800	N/A	2.75	HPJ-85
HPJ-90	95431	90	52	112	14	30	69.5	40	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	36890	23150	160800	N/A	2.98	HPJ-90
HPJ-100	95435	100	52	125	14	30	80	50	M30x3.5	44.5	1.6	30.02	TRB	26670	63480	88960	53380	36890	23150	160800	N/A	3.7	HPJ-100
HPJ-100-1	95434	100	52	125	14	30	69.5	40	M30x3.5	44.5	1.6	30.02	TRB	26700	63480	88960	53380	36890	23150	160800	N/A	3.52	HPJ-100-1
HPJ-125	95440	125	76	148	18	48	105	60	M48x5	82.5	1.6	48.02	TRB	62210	148070	230860	144570	106160	64910	411830	N/A	8.86	HPJ-125
HPJ-150	95441	150	76	173	18.3	64	140	82	M64x6	82.5	1.6	64.02	TRB	66990	159430	250880	147240	254530	153930	731550	N/A	13.07	HPJ-150
HPJ-200	95443	200	76	223	18.3	64	140	82	M64x6	82.5	1.6	64.02	TRB	66990	159430	250880	147240	254530	153930	731550	N/A	20.37	HPJ-200

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

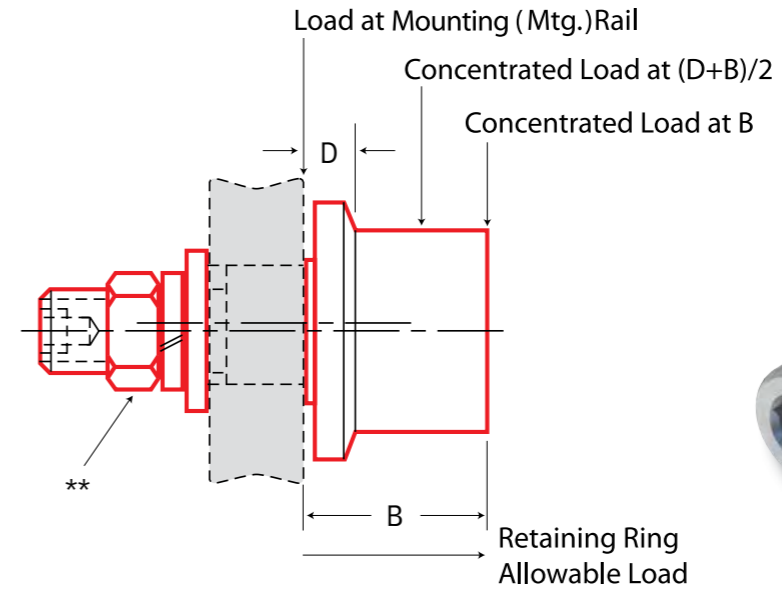
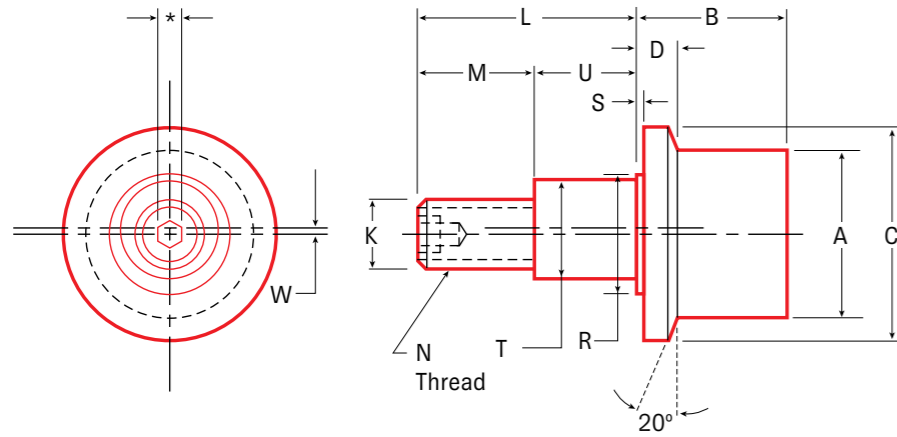
\*\*Lock washer and jam nut available, for size see N dimension.

For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Flanged - Eccentric Stud Style - Metric Sizes (mm)



Part No.	Item No.	A	B	C	D	K	L	M	N	R	S	T	U	W	Rec. Mtg. Hole Size	Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (N)			Bearing Capacity, Static Thrust (N)	Stud Capacity (N)		Retaining Ring Capacity (N)	Approx Weight (kg)	Part No.	
		Roller Dia	Roller Width	Flange Dia	Flange Thickness	Stud Dia	Stud Length	Thread Length	Thread	Shldr Dia	Shldr Length	Eccentric Dia	Eccentric Length	Eccentricity			3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit		Bending=0.75 Sy					Shear=0.75 x 0.5 x Sy
												+0.00 -0.05	+0.00 -0.25				Bend @ (D+B)/2	Bend @ B								
HPJE-26	97386	26	20	35	5	10	23	13	M10x1	17.1	0.8	13	10	0.5	13.02	BB	1070	2790	1000	620	1610	890	8780	1700	0.14	HPJE-26
HPJE-30	97387	30	20	40	5	12	25	14	M12x1.5	17.5	0.8	15	11	0.5	15.02	BB	1070	2790	1000	620	1610	890	8780	1700	0.17	HPJE-30
HPJE-32	97388	32	22	42	5	12	25	14	M12x1.5	17.5	0.8	15	11	0.5	15.02	BB	2300	6010	2690	1660	3070	1690	14450	2090	0.2	HPJE-32
HPJE-35	97389	35	22	46	5	16	32.5	18	M16x1.5	23.8	0.8	20	14.5	1	20.02	BB	2300	6010	2690	1660	3130	1690	14450	2090	0.23	HPJE-35
HPJE-40-1	95907	40	27.6	54	7.8	18	36.5	20.5	M18x1.5	28.5	1.6	22	16	1	22.02	BB	4680	12260	4900	3030	5040	3060	25690	2090	0.35	HPJE-40-1
HPJE-50	95909	50	40	68	14	16	50	32	M16x2	32	1.6	24	18	1	24.02	BB	6490	17020	7210	4450	11980	6930	51600	4050	0.94	HPJE-50
HPJE-62-1	95910	62	44	78	14	24	49.5	27.5	M24x1.5	43	1.6	28	22	1	28.02	BB	8810	23080	10090	6230	12340	7650	64850	5960	1.13	HPJE-62-1
HPJE-76	95912	76	52	98	14	24	70	41	M24x1.5	50	1.6	35	29	1.5	35.02	TRB	26670	63480	88960	53380	18840	11820	102740	N/A	2.31	HPJE-76
HPJE-90	95913	90	52	112	14	24	70	41	M24x1.5	50	1.6	35	29	1.5	35.02	TRB	26670	63480	88960	53380	18840	11820	102740	N/A	3.09	HPJE-90
HPJE-100	95914	100	52	125	14	24	70	41	M24x1.5	50	1.6	35	29	1.5	35.02	TRB	26670	63480	88960	53380	18840	11820	102740	N/A	3.79	HPJE-100
HPJE-125	95915	125	76	148	18	48	105	55	M48x5	82.5	1.6	64	50	1.5	64.02	TRB	62210	148070	230860	144570	106160	65120	411830	N/A	4.74	HPJE-125
HPJE-150	95916	150	76	173	18.3	64	140	75	M64x6	92	1.6	80	65	1.5	80.02	TRB	66990	159430	250880	147240	254530	153930	731550	N/A	5.69	HPJE-150

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

\*\*Lock washer and jam nut available, for size see N dimension.

For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

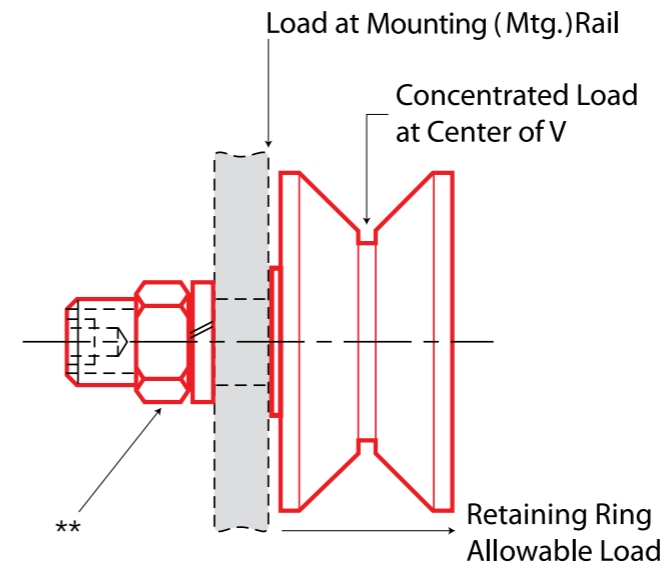
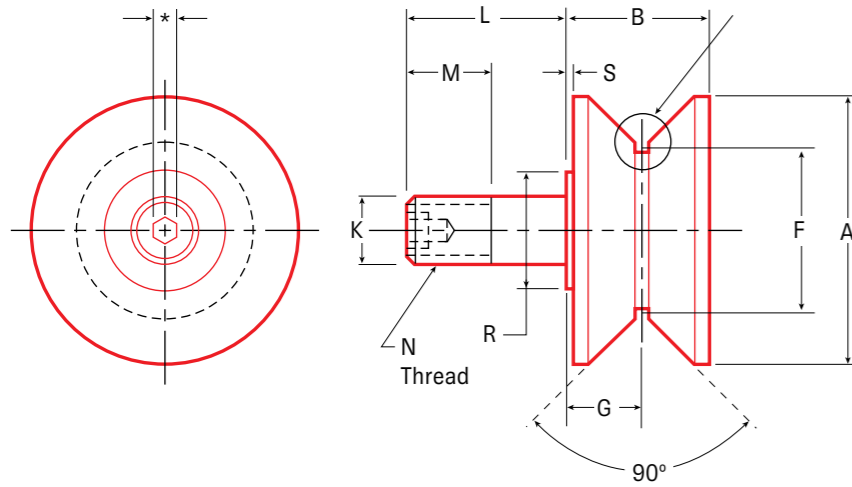
1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## V-Grooved - Concentric Stud Style - Metric Sizes (mm)



See page 83 for details of design recommendations for roller on rail.



Part No.	Item No.	A Roller Dia	B Roller Width	F Point Dia	G Groove Location	K Stud Dia	L Stud Length	M Thread Length	N Thread	R Shoulder Dia	S Shoulder Length	Rec. Mtg. Hole Size		Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (N)			Bearing Capacity, Static Thrust (N)	Stud Capacity (N)		Retaining Ring Capacity (N)	Approx Weight (kg)	Part No.
															3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit		Bending = 0.75 Sy	Shear = 0.75 x 0.5 x Sy			
HPV-26	97390	40	20	26	10	10	23	13	M10x1	13.1	0.5	10.02		BB	1070	2790	1000	620	2210	8780	1700	0.23	HPV-26
HPV-32	97391	50	22	32	11	12	25	14	M12x1.5	15.9	0.8	12.02		BB	2300	6010	2690	1660	3960	14450	2090	0.26	HPV-32
HPV-40	95648	60	33	40	17	14	40	26	M14x2	18	1.6	14.02		BB	4680	12260	4900	3030	5480	25690	2090	0.53	HPV-40
HPV-62	95652	90	44.5	62	23	24	57.9	34.9	M24x3	32	1.6	24.02		BB	8810	23080	10090	6230	15960	64850	5960	1.79	HPV-62
HPV-62-1	95651	90	44.5	62	23	24	49.5	25	M24x1.5	32	1.6	24.02		BB	8810	23080	10090	6230	15880	64850	5960	1.9	HPV-62-1
HPV-76	95654	120	50.5	76	26	30	70	40	M30x3.5	44.5	1.6	30.02		TRB	26670	63480	88960	53380	46360	160800	N/A	3.27	HPV-76
HPV-100	95656	140	50.5	100	26	30	80	50	M30x3.5	44.5	1.6	30.02		TRB	26670	63480	88960	53380	46270	160800	N/A	4.77	HPV-100
HPV-100-1	95655	140	50.5	100	26	30	69.5	40	M30x3.5	44.5	1.6	30.02		TRB	26670	63480	88960	53380	46270	160800	N/A	4.77	HPV-100-1
HPV-125	95657	165	76	125	37.8	48	105	60	M48x5	82.5	1.6	48.02		TRB	62210	148070	^216290	^108140	130771	411830	N/A	11.56	HPV-125

^Surface strength of roller OD

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

\*\*Lock washer and jam nut available, for size see N dimension.

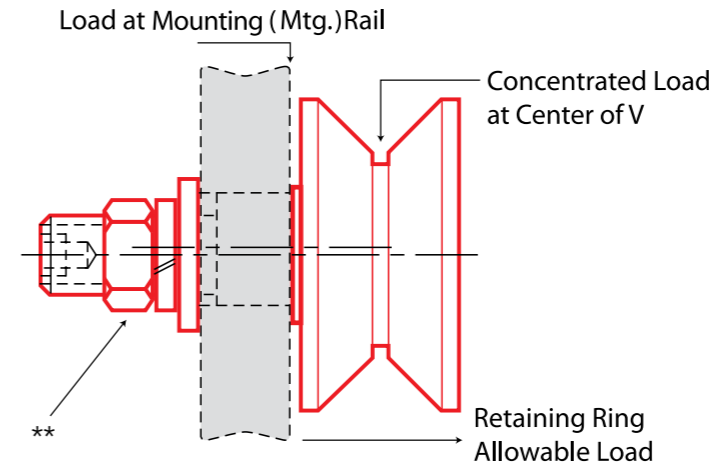
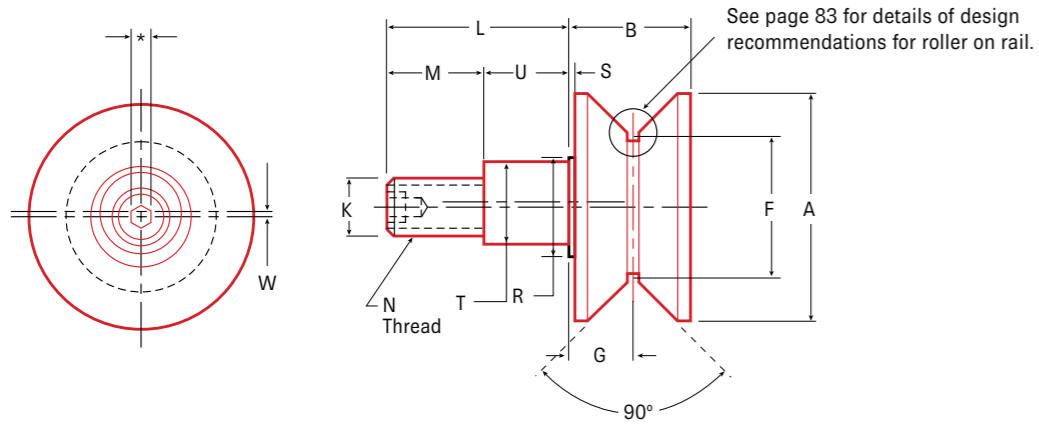
For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

1 kg = 9,81 N = 2,21 lbs

# Load Runners

## V-Grooved - Eccentric Stud Style - Metric Sizes (mm)



Part No.	Item No.	A Roller Dia	B Roller Width	F Point Dia	G Groove Location	K Stud Dia	L Stud Length	M Thread Length	N Thread	R Shldr Dia	S Shldr Length	T Eccentric Dia		U Eccentric Length	W Eccentricity	Rec. Mtg. Hole Size	Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (N)			Bearing Capacity, Static Thrust (N)	Stud Capacity (N)		Retaining Ring Capacity (N)	Approx Weight (kg)	Part No.
												+0.00 -0.05	+0.00 -0.25					3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit		Bending = 0.75 Sy Bend @V	Shear = 0.75 x 0.5 x Sy Load @ Mtg Rail			
HPVE-26	97392	40	20	26	10	10	23	13	M10x1	17.1	0.6	13.00	10	0.5	13.02		BB	1070	2790	1000	620	2220	8780	1700	0.26	HPVE-26
HPVE-32	97393	50	22	32	11	12	25	14	M12x1.5	17.5	0.8	15.00	11	0.5	15.02		BB	2300	6010	2690	1660	3960	14450	2090	0.30	HPVE-32
HPVE-40	95951	60	33	40	17	14	40	24	M14x2	28.5	1.6	22	16	1	22.02		BB	4680	12260	4900	3030	5480	25690	2090	0.64	HPVE-40
HPVE-62	95953	90	44.5	62	23	24	58	38	M24x3	43	1.6	28	20	1.5	28.02		BB	8810	23080	10090	6230	15800	64850	5960	1.57	HPVE-62
HPVE-62-1	95952	90	44.5	62	23	24	49.5	27.5	M24x1.5	43	1.6	28	22	1	28.02		BB	8810	23080	10090	6230	15800	64850	5960	1.57	HPVE-62-1
HPVE-76	95955	120	50.5	76	26	24	70	41	M24x1.5	50	1.6	35	29	1.5	35.02		TRB	26670	63480	88960	53380	23520	113910	N/A	3.43	HPVE-76
HPVE-100	95956	140	50.5	100	26	24	70	41	M24x1.5	50	1.6	35	29	1.5	35.02		TRB	26670	63480	88960	53380	23630	113910	N/A	4	HPVE-100
HPVE-125	95957	165	76	125	37.8	48	105	55	M48x5	82.5	1.6	64	50	1.5	64.02		TRB	62210	148070	^216290	^108140	130770	411830	N/A	4.72	HPVE-125

^Surface strength of roller OD

Other sizes available upon request.  
 \*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.  
 \*\*Lock washer and jam nut available, for size see N dimension.  
 For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
 1 kg = 9,81 N = 2,21 lbs

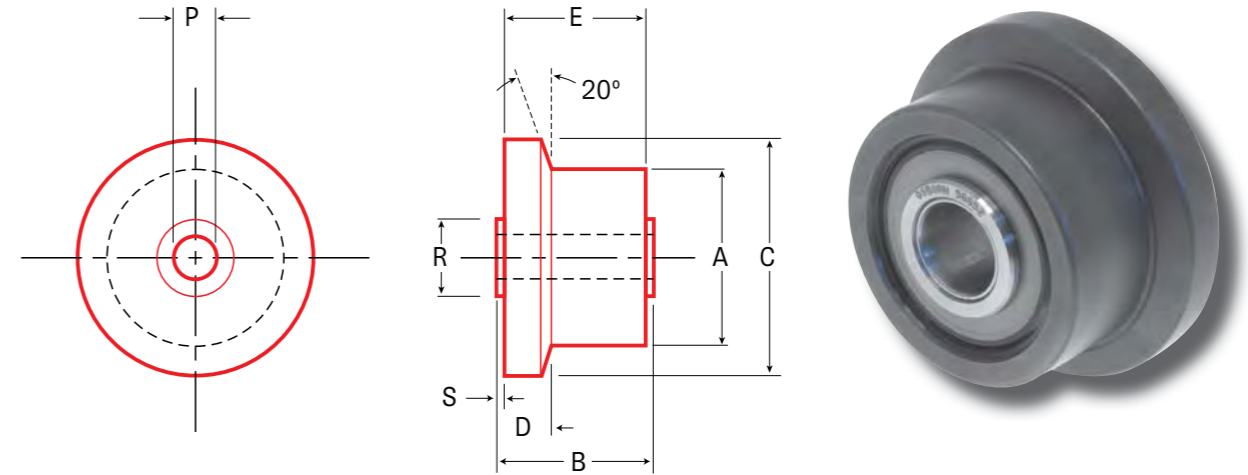
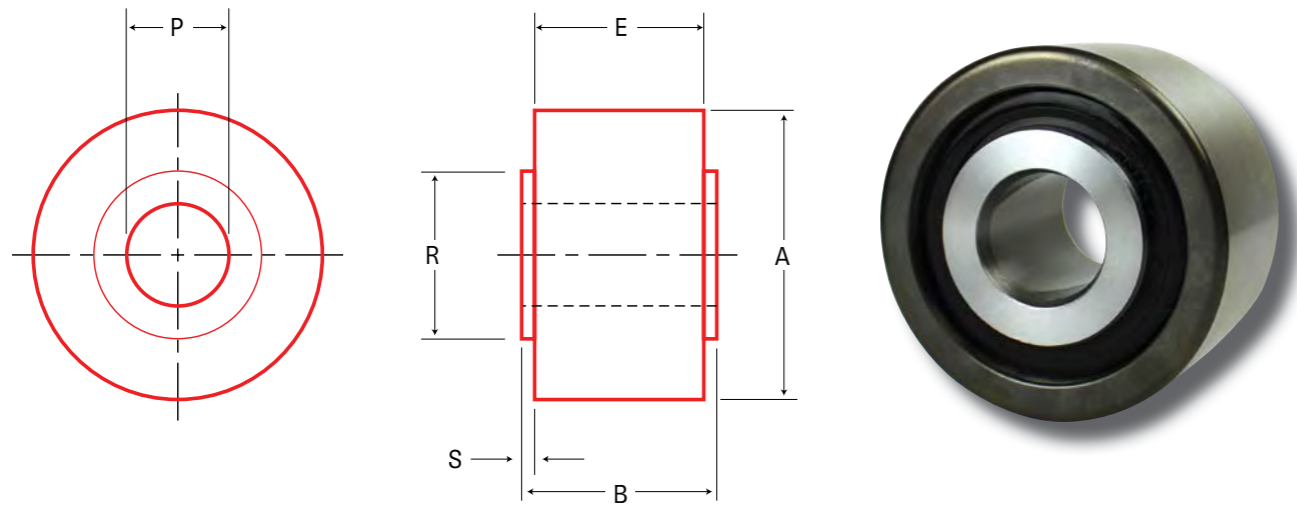
# LOAD RUNNERS

## Plain - Yoke Style - Metric Sizes (mm)



# LOAD RUNNERS

## Flanged - Yoke Style - Metric Sizes (mm)



Part No.	Item No.	A	B	E	P	R	S	Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (N)			Bearing Capacity, Static Thrust (N)	Approx Weight (kg)
		Roller Dia	Roller Width	Tread Width	Bore	Shldr Dia	Shldr Length		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit		
		+0.00 -0.02			+0.00 -0.02								
HPCA-40	90271	40	23	22	10	22	0.5	BB	3140	8220	3460	2140	0.14
HPCA-50	90272	50	33	32	15	28	0.5	BB	5780	15140	8070	4980	0.32
HPCA-62	97297	62	40	38	20	32	1	TRB	20330	48390	33900	20300	0.91
HPCA-62-2	90273	62	40	38	20	32	1	BB	9490	24880	11240	6940	0.91
HPCA-76	96105	76	46	44	25	44.5	1	TRB	26670	63480	88960	53380	1.24
HPCA-80	96107	80	46	44	25	44.5	1	TRB	26670	63480	88960	53380	1.41
HPCA-85	96108	85	46	44	25	44.5	1	TRB	26670	63480	88960	53380	1.6
HPCA-90	96109	90	56	54	30	57.2	1	TRB	32870	78240	120990	58270	1.92
HPCA-100	96110	100	56	54	30	57.2	1	TRB	32870	78240	120990	58270	2.93
HPCA-125	96111	125	71	68	45	82.6	1.5	TRB	62210	148070	230860	144570	5.01
HPCA-150	96112	150	73	70	55	88.9	1.5	TRB	66990	159430	250880	147240	8.65
HPCA-200	96114	200	79	76	70	108	1.5	TRB	79300	188740	354970	215290	19.58
HPCA-250	96116	250	79	76	70	108	1.5	TRB	79300	188740	354970	215290	35.74

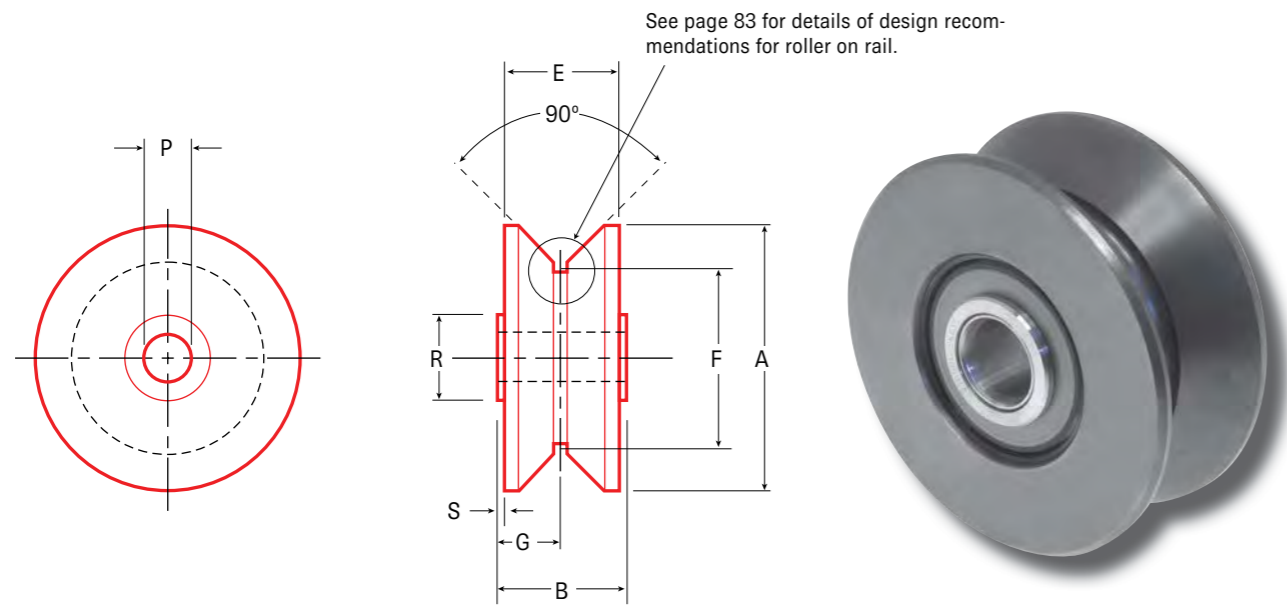
For heavy duty shafts, see page 43  
 Other sizes available upon request  
 Refer to INSTALLATION NOTES on pages 87-89  
 LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
 1 kg = 9,81 N = 2,21 lbs

Part No.	Item No.	A	B	C	D	E	P	R	S	Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (N)			Bearing Capacity, Static Thrust (N)	Approx Weight (kg)
		Roller Dia	Roller Width	Flange Dia	Flange Thickness	Tread Width	Bore	Shldr Dia	Shldr Length		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit		
							+0.00 -0.02								
HPJA-40	90274	40	23	54	6.0	22	10	22.0	0.5	BB	3140	8220	3460	2140	0.19
HPJA-50	90275	50	33	68	10.0	32	15	28.0	0.5	BB	5780	15140	8070	4980	0.64
HPJA-62	97298	62	40	78	14.0	38	20	32.0	1.0	TRB	20330	48390	33940	20330	1.09
HPJA-62-2	90276	62	40	78	14.0	38	20	32.0	1.0	BB	9490	24880	11240	6940	1.09
HPJA-76	96209	76	46	98	13.5	44	25	44.5	1.0	TRB	26670	63480	88960	53380	1.24
HPJA-80	96210	80	46	102	13.5	44	25	44.5	1.0	TRB	26670	63480	88960	53380	1.71
HPJA-85	96211	85	46	107	13.5	44	25	44.5	1.0	TRB	26670	63480	88960	53380	1.95
HPJA-90	96212	90	56	112	13.5	54	30	57.2	1.0	TRB	32870	78240	120990	58270	2.37
HPJA-100	96213	100	56	122	13.5	54	30	57.2	1.0	TRB	32870	78240	120990	58270	3.43
HPJA-125	96214	125	71	148	18.2	68	45	82.6	1.5	TRB	62210	148070	230860	144570	5.72
HPJA-150	96215	150	73	173	18.2	70	55	88.9	1.5	TRB	66990	159430	250880	147240	9.56
HPJA-200	96217	200	79	223	18.2	76	70	108.0	1.5	TRB	79300	188740	354970	215290	20.78
HPJA-250	96219	250	79	273	18.2	76	70	108.0	1.5	TRB	79300	188740	354970	215290	37.25

For heavy duty shafts, see page 43  
 Other sizes available upon request  
 Refer to INSTALLATION NOTES on pages 87-89  
 LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
 1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## V-Grooved - Yoke Style - Metric Sizes (mm)



See page 83 for details of design recommendations for roller on rail.

Part No.	Item No.	A	B	E	F	G	P	R	S	Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (N)			Bearing Capacity, Static Thrust (N)	Approx Weight (kg)
		Roller Dia	Roller Width	Tread Width	Point Dia	Groove Location	Bore	Shldr Dia	Shldr Length		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Static Limit		
HPVA-40	90277	60	23	22	40	11.5	10	22.0	0.5	BB	3140	8220	3460	2140	0.460
HPVA-50	90278	75	33	32	50	16.5	15	28.0	0.5	BB	5780	15140	8070	4980	0.960
HPVA-62	97299	90	40	38	62	20.0	20	32.0	1.0	TRB	20300	48390	33940	20330	1.270
HPVA-62-2	90279	90	40	38	62	20.0	20	32.0	1.0	BB	6930	18170	10590	6540	1.270
HPVA-76	96255	110	46	44	76	23.0	25	44.5	1.0	TRB	26670	63480	88960	53380	2.210
HPVA-100	96256	140	56	54	100	28.0	30	57.2	1.0	TRB	32870	78240	120990	58270	5.080
HPVA-125	96257	165	71	68	125	35.5	45	82.6	1.5	TRB	62210	148070	^26230	^108140	8.520
HPVA-150	96259	190	73	70	150	36.5	55	88.9	1.5	TRB	66990	159430	250880	126380	13.79
HPVA-200	96261	240	79	76	200	39.5	70	108.0	1.5	TRB	79300	188740	325740	162870	29.60
HPVA-250	96263	290	79	76	250	39.5	70	108.0	1.5	TRB	79300	188740	354970	^199360	56.52

^Surface strength of roller OD

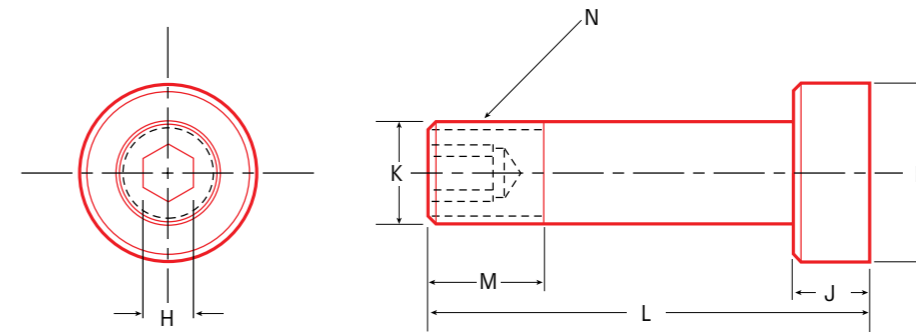
For heavy duty shafts, see page 43  
 Other sizes available upon request  
 Refer to INSTALLATION NOTES on pages 87-89  
 LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
 1 kg = 9,81 N = 2,21 lbs

# Load Runners®

# LOAD RUNNERS

## Heavy Duty Concentric Shafts for Yoke Style Idler-Rollers - Metric Sizes (mm)

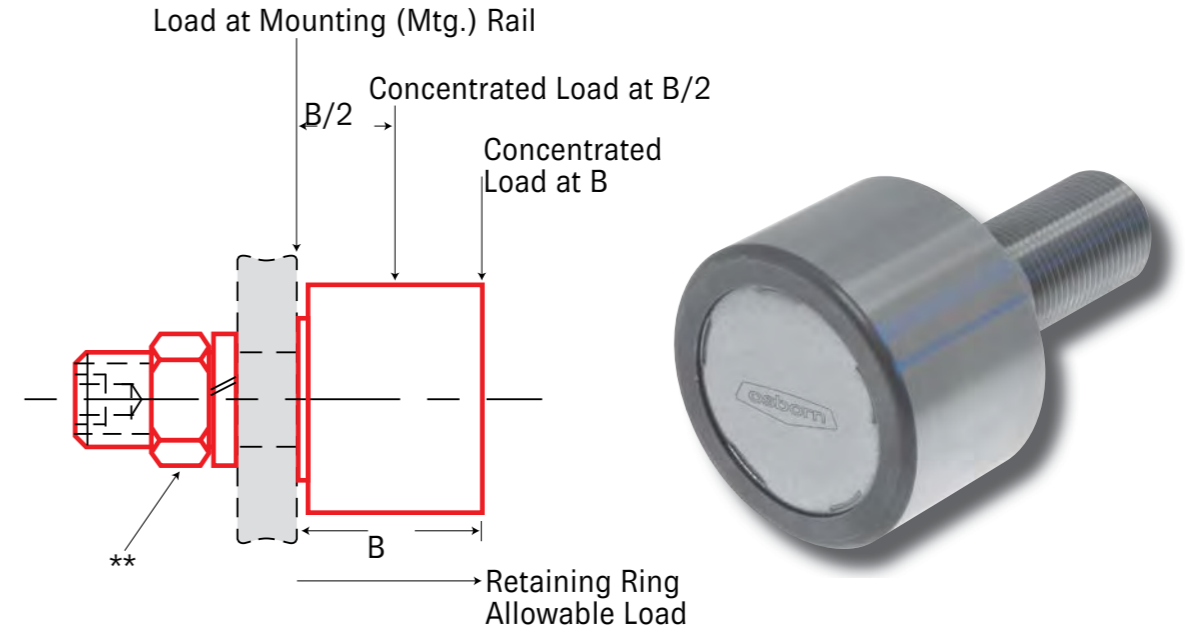
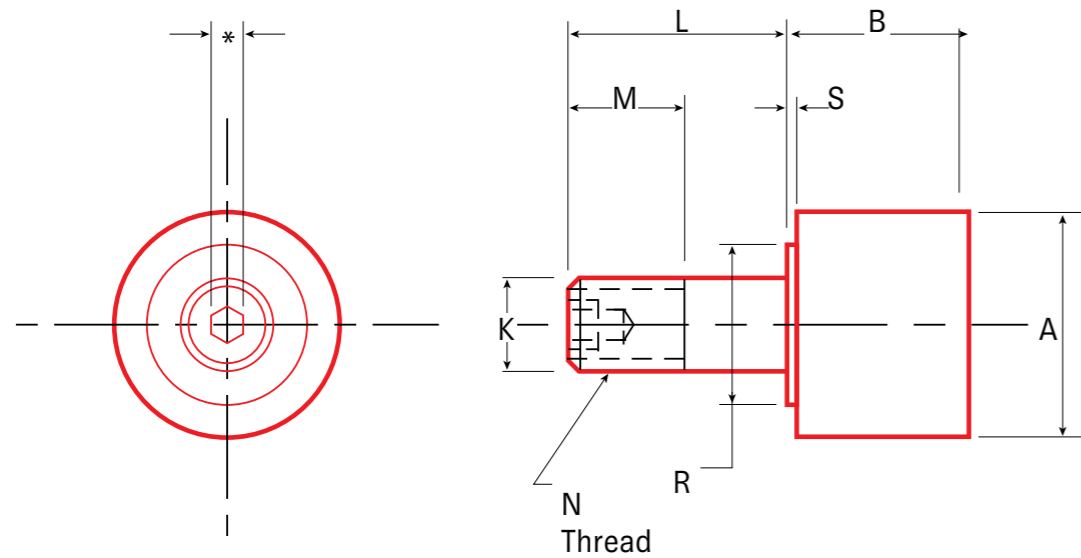
Shaft Style A includes jam nut and lock washer



Part No.	Item No.	Fits HPCA & HPJA	Fits HPVA	E	H	J	K	L	M	N	Approx Weight (kg)
				Head Dia	Hex Size	Head Length	Shaft Dia	Shaft Length	Thread Length	Thread	
MSHA-10	90280	40	40	18.00	4.0	10	10	55	15	M10x1.0	0.320
MSHA-15	90281	50	50	25.00	8.0	14	15	80	22	M14x2.0	0.460
MSHA-20	97300	62	62	31.75	8.0	16	20	94	25	M20x1.5	0.700
MSHA-25	95001	76, 80, 85	76	44.50	8.0	19	25	110	29	M24x1.5	0.750
MSHA-30	95002	90, 100	100	57.20	12.2	22	30	135	31	M30x3.5	0.950
MSHA-45	95003	125	125	82.60	12.2	32	45	185	54	M45x4.5	1.500
MSHA-55	95004	150	150	88.90	12.2	32	55	195	62	M52x5	5.700
MSHA-70	95005	200, 250	200, 250	108.00	12.2	35	70	220	74	M70x6	10.00

# LOAD RUNNERS

## Plain - Concentric Stud Style - Inch Sizes



For metric sizes, please turn to page 28

Part No.	Item No.	A	B	K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (lbs)			Bearing Capacity, Static Thrust (lbs)	Stud Capacity (lbs)		Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.	
		Roller Dia	Roller Width	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Diameter	Shoulder Length		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM		Static Limit	Bending=0.75 Sy	Shear=0.75 x 0.5 x Sy							
		+0.000 -0.001		+0.000 -0.001											Concent. Load @ B/2	Concent. Load @ B							
PLR-1	97318	1.000	0.781	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	BB	240	630	230	140	480	210	1970	380	0.2	PLR-1
PLR-1-1/8	97319	1.125	0.781	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	BB	240	630	230	140	480	210	1970	380	0.3	PLR-1-1/8
PLR-1-1/4	97320	1.250	0.844	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	BB	520	1350	600	370	880	390	3250	470	0.3	PLR-1-1/4
PLR-1-3/8	97321	1.375	0.844	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	BB	520	1350	600	370	880	390	3250	470	0.4	PLR-1-3/8
PLR-1-1/2	95086	1.500	1.187	0.625	1.500	0.750	5/8-18	0.750	0.062	0.626	1.000	0.750	BB	1050	2760	1100	680	1390	650	5780	470	0.5	PLR-1-1/2
PLR-1-3/4	95112	1.750	1.187	0.750	1.750	0.875	3/4-16	1.000	0.062	0.751	1.125	0.875	BB	1050	2760	1100	680	1390	650	5780	470	0.8	PLR-1-3/4
PLR-1-3/4-5	95115	1.750	1.437	0.500	0.875	0.750	1/2-13NC	0.625	0.312	0.501	-	-	BB	1050	2760	1100	680	480	290	4150	470	0.7	PLR-1-3/4-5
PLR-2	95125	2.000	1.687	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	BB	1460	3830	1620	1000	4010	1500	11610	910	1.3	PLR-2
PLR-2-3	95126	2.000	1.375	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	BB	1460	3830	1620	1000	3090	1520	11610	910	1.2	PLR-2-3
PLR-2-1/4	95152	2.250	1.687	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	BB	1460	3830	1620	1000	4010	1500	11610	910	1.8	PLR-2-1/4
PLR-2-1/2	95160	2.500	1.687	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	BB	1980	5190	2270	1400	3730	1770	14580	1340	2.3	PLR-2-1/2
PLR-2-1/2-10	95164	2.500	1.812	1.000	2.250	1.500	1-14	1.250	0.187	1.001	1.250	0.750	BB	1980	5190	2270	1400	3730	1770	14580	1340	2.3	PLR-2-1/2-10
PLR-2-1/2-16	95165	2.500	1.812	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	TRB	4570	10880	7630	4570	6920	3700	25920	N/A	2.3	PLR-2-1/2-16
PLR-2-3/4	95190	2.750	1.687	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	BB	1980	5190	2270	1400	3730	1770	14580	1340	2.8	PLR-2-3/4
PLR-3	95200	3.000	2.000	1.250	2.500	1.750	1-1/4-12	1.750	0.062	1.251	1.250	1.000	TRB	6000	14270	20000	12000	12270	6330	40500	N/A	4.0	PLR-3
PLR-3-1/4	95245	3.250	2.000	1.250	2.500	1.750	1-1/4-12	1.750	0.062	1.251	1.250	1.000	TRB	6000	14270	20000	12000	12270	6330	40500	N/A	4.8	PLR-3-1/4
PLR-3-1/2	95248	3.500	2.000	1.250	2.750	1.750	1-1/4-12	1.750	0.062	1.251	1.500	1.250	TRB	6000	14270	20000	12000	12270	6330	40500	N/A	5.5	PLR-3-1/2
PLR-4	95268	4.000	2.000	1.250	2.750	1.750	1-1/4-12	1.750	0.062	1.251	1.500	1.250	TRB	6000	14270	20000	12000	12270	6330	40500	N/A	7.1	PLR-4
PLR-4-1/2	95304	4.500	2.000	1.250	2.750	1.750	1-1/4-12	1.750	0.062	1.251	1.500	1.250	TRB	6000	14270	20000	12000	12270	6330	40500	N/A	9.0	PLR-4-1/2
PLR-5	95323	5.000	3.000	2.000	4.500	2.500	2-1/2	3.250	0.062	2.001	2.750	2.000	TRB	13990	33290	51900	32500	34120	17350	103670	N/A	19.0	PLR-5
PLR-6	95353	6.000	3.000	2.500	5.500	3.250	2-1/2-12	3.250	0.062	2.501	3.250	2.000	TRB	15060	35840	56400	33100	66710	33910	161990	N/A	28.0	PLR-6
PLR-7	95374	7.000	3.000	2.500	5.500	3.250	2-1/2-12	3.250	0.062	2.501	3.250	2.000	TRB	15060	35840	56400	33100	66710	33910	161990	N/A	36.0	PLR-7
PLR-8	95386	8.000	3.000	2.500	5.500	3.250	2-1/2-12	3.250	0.062	2.501	3.250	2.000	TRB	15060	35840	56400	33100	66710	33910	161990	N/A	49.0	PLR-8
PLR-10	95398	10.000	3.000	2.500	5.500	3.250	2-1/2-12	3.250	0.062	2.501	3.250	2.000	TRB	15060	35840	56400	33100	66710	33760	161990	N/A	72.0	PLR-10
PLR-10-1	95399	10.000	5.000	4.250	9.000	4.000	3-1/2-4NC	5.000	0.125	4.252	5.750	5.125	TRB	34410	81890	159800	116000	194120	99480	468150	N/A	130.0	PLR-10-1

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

\*\*Lock washer and jam nut available, for size see N dimension.

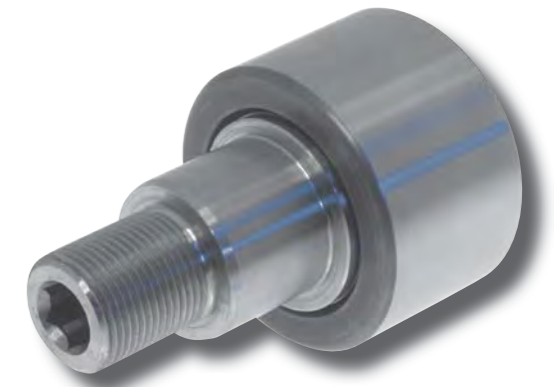
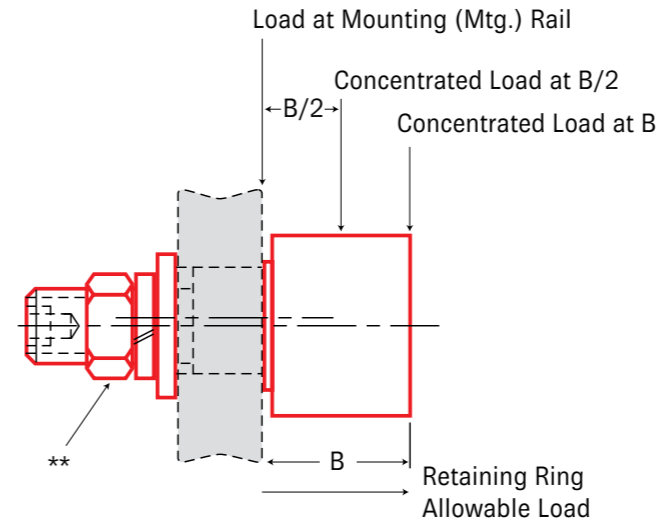
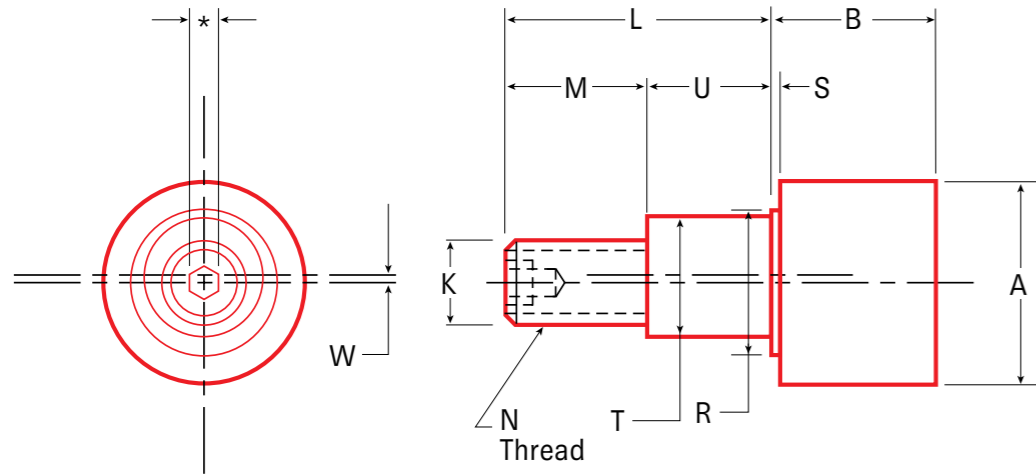
For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Plain - Eccentric Stud Style, Inch Sizes



For metric sizes, please turn to page 30

Part No.	Item No.	A	B	K	L	M	N	R	S	T	U	W	Rec. Mtg. Hole Size	Mounting Member Thickness		Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (lbs)			Bearing Capacity, Static Thrust (lbs)	Stud Capacity (lbs)		Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.	
		Roller Dia	Roller Width	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length	Eccentric Dia	Eccentric Length	Eccentricity		Max	Min		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit		Bending=0.75 Sy					Shear= 0.75 x 0.5 x Sy
		+0.000 -0.001								+0.001 -0.000	+0.000 -0.010								Concent. Load @B/2		Concent. Load @B					
PLRE-1	97322	1.000	0.781	0.437	1.000	0.500	7/16-20	0.750	0.031	0.625	0.500	0.030	0.627	0.625	0.500	BB	240	630	230	140	480	210	1970	470	0.3	PLRE-1
PLRE-1-1/8	97323	1.125	0.781	0.437	1.000	0.500	7/16-20	0.750	0.031	0.625	0.500	0.030	0.627	0.625	0.500	BB	240	630	230	140	480	210	1970	470	0.3	PLRE-1-1/8
PLRE-1-1/4	97324	1.250	0.844	0.500	1.250	0.625	1/2-20	0.812	0.031	0.687	0.625	0.030	0.689	0.750	0.625	BB	520	1350	600	370	880	390	3250	470	0.4	PLRE-1-1/4
PLRE-1-3/8	97325	1.375	0.844	0.500	1.250	0.625	1/2-20	0.812	0.031	0.687	0.625	0.030	0.689	0.750	0.625	BB	520	1350	600	370	880	390	3250	470	0.4	PLRE-1-3/8
PLRE-1-1/2	95849	1.500	1.188	0.625	1.500	0.770	5/8-18	1.125	0.062	0.875	0.730	0.030	0.877	0.875	0.750	BB	1050	2760	1100	680	1390	650	5780	470	0.6	PLRE-1-1/2
PLRE-1-3/4	95853	1.750	1.188	0.750	1.750	0.895	3/4-16	1.240	0.062	1.000	0.855	0.030	1.002	1.000	0.875	BB	1050	2760	1100	680	1390	650	5780	470	0.9	PLRE-1-3/4
PLRE-2	95857	2.000	1.688	0.875	2.000	1.020	7/8-14	1.500	0.062	1.187	0.980	0.030	1.189	1.125	1.000	BB	1460	3830	1620	1000	4010	1500	11610	910	1.6	PLRE-2
PLRE-2-1/4	95863	2.250	1.688	0.875	2.000	1.020	7/8-14	1.500	0.062	1.187	0.980	0.030	1.189	1.125	1.000	BB	1460	3830	1620	1000	4010	1500	11610	910	2.0	PLRE-2-1/4
PLRE-2-1/2	95869	2.500	1.688	1.000	2.250	1.145	1-14	1.687	0.062	1.375	1.105	0.030	1.377	1.250	1.125	BB	1980	5190	2270	1400	3730	1770	14580	1340	2.5	PLRE-2-1/2
PLRE-2-1/2-7	97603	2.500	1.812	1.000	2.250	1.145	1-14	1.687	0.062	1.375	1.105	0.030	1.377	1.250	1.125	TRB	4570	10880	7630	4570	6720	3640	14580	N/A	2.5	PLRE-2-1/2-7
PLRE-2-3/4	95875	2.750	1.688	1.000	2.250	1.145	1-14	1.687	0.062	1.375	1.105	0.030	1.377	1.250	1.125	BB	1980	5190	2270	1400	3730	1770	14580	1340	3.4	PLRE-2-3/4
PLRE-3	95876	3.000	2.000	1.250	2.500	1.270	1-1/4-12	2.312	0.062	1.750	1.230	0.060	1.752	1.375	1.250	TRB	6000	14270	20000	12000	12430	6370	40500	N/A	4.5	PLRE-3
PLRE-3-1/4	95887	3.250	2.000	1.250	2.500	1.270	1-1/4-12	2.312	0.062	1.750	1.230	0.060	1.752	1.375	1.250	TRB	6000	14270	20000	12000	12430	6370	40500	N/A	5.4	PLRE-3-1/4
PLRE-3-1/2	95888	3.500	2.000	1.250	2.750	1.395	1-1/4-12	2.312	0.062	1.812	1.355	0.060	1.814	1.500	1.375	TRB	6000	14270	20000	12000	12430	6370	40500	N/A	6.5	PLRE-3-1/2
PLRE-4	95892	4.000	2.000	1.250	2.750	1.395	1-1/4-12	2.312	0.062	1.812	1.355	0.060	1.814	1.500	1.375	TRB	6000	14270	20000	12000	12430	6370	40500	N/A	8.3	PLRE-4
PLRE-5	95900	5.000	3.000	2.000	4.500	2.375	2-12	3.250	0.062	2.625	2.125	0.060	2.627	2.500	2.250	TRB	13990	33290	51900	32500	34120	17350	103670	N/A	21.0	PLRE-5
PLRE-6	95903	6.000	3.000	2.500	5.500	2.625	2-1/2-12	3.625	0.062	3.125	2.875	0.060	3.127	3.250	3.000	TRB	15060	35840	56400	33100	68710	33910	161990	N/A	30.5	PLRE-6

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

\*\*Lock washer and jam nut available, for size see N dimension.

For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

1 kg = 9,81 N = 2,21 lbs

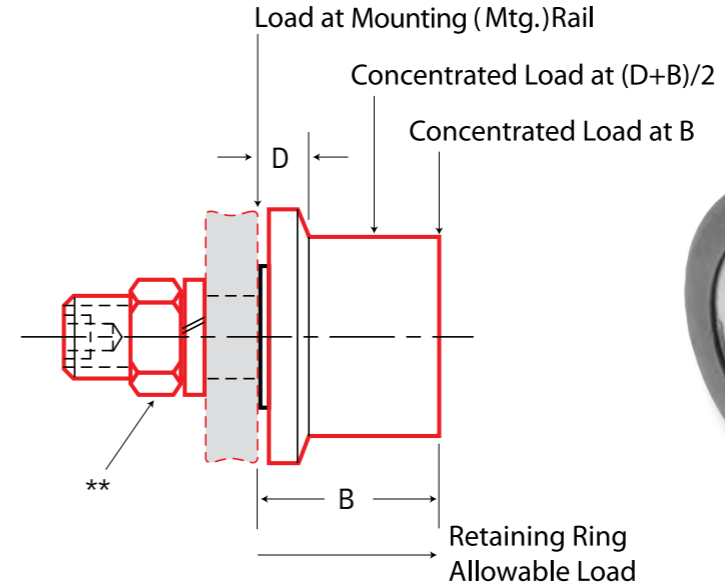
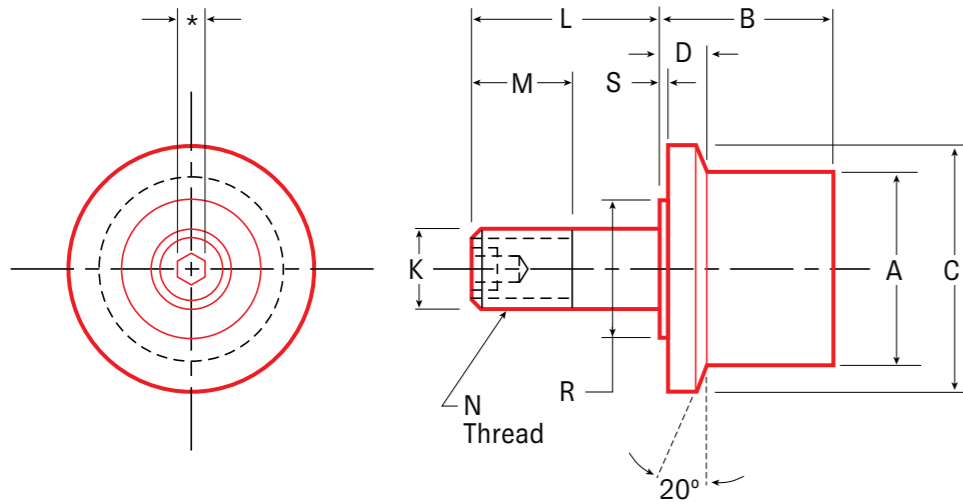


# LOAD RUNNERS

## Flanged - Concentric Stud Style, Inch Sizes



**Load Runners®**



For metric sizes, please turn to page 32

Part No.	Item No.	A Roller Dia	B Roller Width	C Flange Dia	D Flange Thickness	K Stud Dia +0.000 -0.001	L Stud Length	M Thread Length	N Thread	R Shoulder Dia	S Shoulder Length	Rec. Mtg. Hole Size +0.001 -0.000	Mounting Member Thickness		Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (lbs)			Bearing Capacity, Static Thrust (lbs)	Stud Capacity (lbs)		Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.	
													Max	Min		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit		Bending=0.75 Sy					
																Concent. Load @ (D+B)/2	Concent. Load @ B	Shear=0.75 x 0.5 x Sy							
FLR-1	97326	1.000	0.781	1.375	0.219	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	BB	240	630	230	140	370	210	1970	380	0.3	FLR-1
FLR-1-1/8	97327	1.125	0.781	1.500	0.219	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	BB	240	630	230	140	370	210	1970	380	0.3	FLR-1-1/8
FLR-1-1/4	97328	1.250	0.844	1.563	0.219	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	BB	520	1350	600	370	710	390	3250	470	0.4	FLR-1-1/4
FLR-1-3/8	97329	1.375	0.844	1.688	0.219	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	BB	520	1350	600	370	710	390	3250	470	0.4	FLR-1-3/8
FLR-1-1/2	95445	1.500	1.188	2.188	0.343	0.625	1.500	0.750	5/8-18	0.750	0.062	0.626	1.000	0.750	BB	1050	2760	1100	680	1100	650	5780	470	0.6	FLR-1-1/2
FLR-1-1/2-2	95446	1.500	1.063	2.000	0.343	0.500	1.375	0.750	1/2-20	0.625	0.125	0.501	1.000	0.750	BB	930	2430	970	600	700	420	4020	470	0.5	FLR-1-1/2-2
FLR-1-3/4	95472	1.750	1.188	2.438	0.343	0.750	1.750	0.875	3/4-16	1.000	0.062	0.751	1.125	0.875	BB	1050	2760	1100	680	1100	650	5780	470	1.0	FLR-1-3/4
FLR-2	95482	2.000	1.688	2.688	0.593	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	BB	1460	3830	1620	1000	2640	1500	11610	910	1.8	FLR-2
FLR-2-1/4	95498	2.250	1.688	2.938	0.593	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	BB	1460	3830	1620	1000	2640	1500	11610	910	2.1	FLR-2-1/4
FLR-2-1/2	95502	2.500	1.688	3.188	0.593	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	BB	1980	5190	2270	1400	2780	1770	14580	1340	2.8	FLR-2-1/2
FLR-2-1/2-1	95503	2.500	1.812	3.188	0.593	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	TRB	4570	10890	7630	4570	5460	3580	25920	N/A	2.8	FLR-2-1/2-1
FLR-2-3/4	95515	2.750	1.688	3.438	0.593	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	BB	1980	5190	2270	1400	2780	1770	14580	1340	3.2	FLR-2-3/4
FLR-3	95520	3.000	2.000	3.938	0.593	1.250	2.500	1.750	1-1/4-12	1.750	0.062	1.251	1.250	1.000	TRB	6000	14270	20000	12000	9880	6330	40500	N/A	4.7	FLR-3
FLR-3-1/4	95555	3.250	2.000	4.188	0.593	1.250	2.500	1.750	1-1/4-12	1.750	0.062	1.251	1.250	1.000	TRB	6000	14270	20000	12000	9880	6330	40500	N/A	5.3	FLR-3-1/4
FLR-3-1/2	95558	3.500	2.000	4.438	0.593	1.250	2.750	1.750	1-1/4-12	1.750	0.062	1.251	1.250	1.000	TRB	6000	14270	20000	12000	9880	6330	40500	N/A	6.2	FLR-3-1/2
FLR-4	95562	4.000	2.000	4.938	0.593	1.250	2.750	1.750	1-1/4-12	1.750	0.062	1.251	1.250	1.000	TRB	6000	14270	20000	12000	9880	6330	40500	N/A	7.9	FLR-4
FLR-4M	95567	4.000	2.000	4.938	1.000	1.250	2.750	1.750	1-1/4-12	1.750	0.062	1.251	1.250	1.000	TRB	6000	14270	20000	12000	8530	6330	40500	N/A	8.1	FLR-4M
FLR-4-1/2	95591	4.500	2.000	5.438	0.593	1.250	2.750	1.750	1-1/4-12	1.750	0.062	1.251	1.250	1.000	TRB	6000	14270	20000	12000	9880	6330	40500	N/A	9.9	FLR-4-1/2
FLR-5	95601	5.000	3.000	5.938	0.718	2.000	4.500	2.500	2-12	3.250	0.062	2.001	2.750	2.000	TRB	13990	33290	51900	32500	28300	17350	103670	N/A	18.5	FLR-5
FLR-6	95625	6.000	3.000	6.938	0.718	2.500	5.500	3.250	2-1/2-12	3.250	0.062	2.501	3.250	2.000	TRB	15060	35840	56400	33100	55320	33910	161990	N/A	29.5	FLR-6
FLR-7	95640	7.000	3.000	7.938	0.718	2.500	5.500	3.250	2-1/2-12	3.250	0.062	2.501	3.250	2.000	TRB	15060	35840	56400	33100	55320	33910	161990	N/A	38.0	FLR-7
FLR-8	95641	8.000	3.000	8.938	0.718	2.500	5.500	3.250	2-1/2-12	3.250	0.062	2.501	3.250	2.000	TRB	15060	35840	56400	33100	55320	33910	161990	N/A	46.0	FLR-8

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

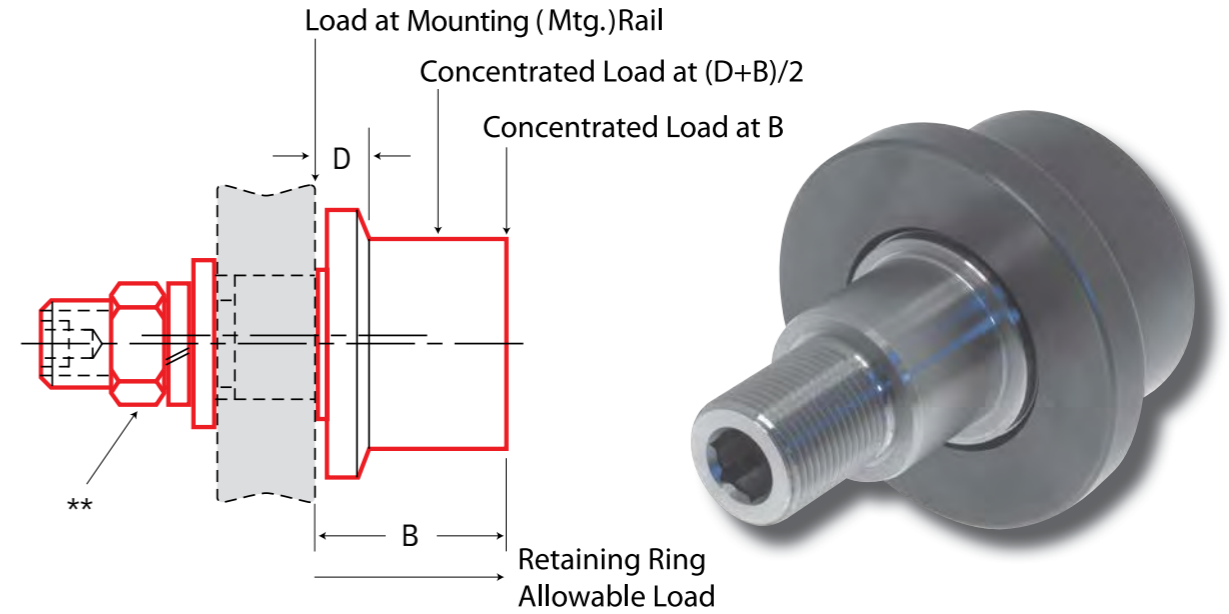
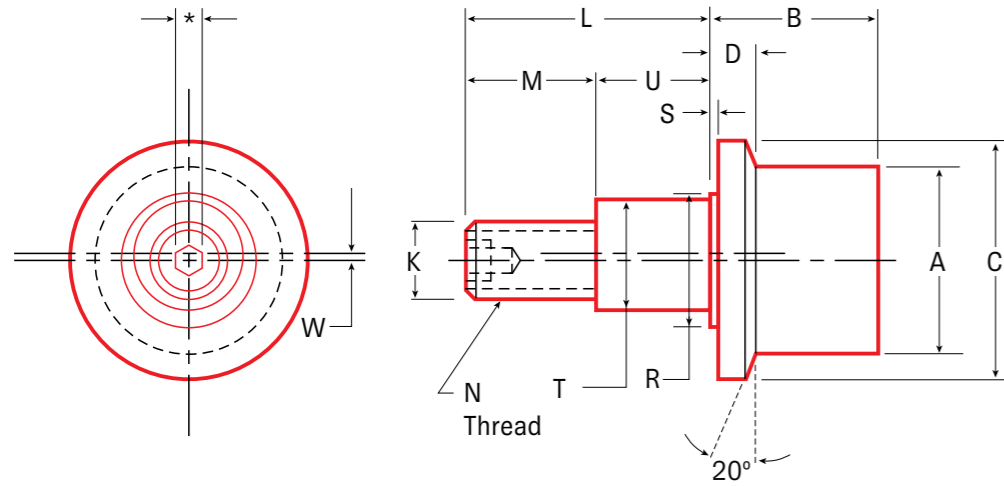
\*\*Lock washer and jam nut available, for size see N dimension.

For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Flanged - Eccentric Stud Style - Inch Sizes



For metric sizes, please turn to page 34

Part No.	Item No.	A Roller Dia	B Roller Width	C Flange Dia	D Flange Thickness	K Stud Dia	L Stud Length	M Thread Length	N Thread	R Shoulder Dia	S Shoulder Length	T Eccentric Dia	U Eccentric Length	W Eccentricity	Rec. Mtg. Hole Size	Mounting Member Thickness		Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (lbs)			Bearing Capacity, Static Thrust (lbs)	Stud Capacity (lbs)			Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
																Max	Min		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Static Limit		Bending=0.75 Sy		Shear=0.75 x 0.5 x Sy			
																							Concent. Load @ (D+B)/2	Concent. Load @ B				
FLRE-1	97330	1.000	0.781	1.375	0.219	0.437	1.000	0.500	7/16-20	0.750	0.031	0.625	0.500	0.030	0.627	0.625	0.500	BB	240	630	230	140	350	200	1970	380	0.3	FLRE-1
FLRE-1-1/8	97331	1.125	0.781	1.500	0.219	0.437	1.000	0.500	7/16-20	0.750	0.031	0.625	0.500	0.030	0.627	0.625	0.500	BB	240	630	230	140	360	210	1970	380	0.4	FLRE-1-1/8
FLRE-1-1/4	97332	1.250	0.844	1.563	0.219	0.500	1.250	0.625	1/2-20	0.812	0.031	0.687	0.625	0.030	0.689	0.750	0.625	BB	520	1350	600	370	710	390	3250	470	0.4	FLRE-1-1/4
FLRE-1-3/8	97333	1.375	0.844	1.688	0.219	0.500	1.250	0.625	1/2-20	0.812	0.031	0.687	0.625	0.030	0.689	0.750	0.625	BB	520	1350	600	370	710	390	3250	470	0.5	FLRE-1-3/8
FLRE-1-1/2	95917	1.500	1.187	2.188	0.343	0.625	1.500	0.770	5/8-18	1.125	0.062	0.875	0.730	0.030	0.877	0.875	0.750	BB	1050	2760	1100	680	1100	650	5780	470	0.8	FLRE-1-1/2
FLRE-1-3/4	95922	1.750	1.187	2.438	0.343	0.750	1.750	0.895	3/4-16	1.240	0.062	1.000	0.855	0.030	1.002	1.000	0.875	BB	1050	2760	1100	680	1130	650	5780	470	1.1	FLRE-1-3/4
FLRE-2	95924	2.000	1.688	2.688	0.593	0.875	2.000	1.020	7/8-14	1.500	0.062	1.187	0.980	0.030	1.189	1.125	1.000	BB	1460	3830	1620	1000	2640	1500	11610	910	2.1	FLRE-2
FLRE-2-1/4	95927	2.250	1.688	2.938	0.593	0.875	2.000	1.020	7/8-14	1.500	0.062	1.187	0.980	0.030	1.189	1.125	1.000	BB	1460	3830	1620	1000	2640	1500	11610	910	2.5	FLRE-2-1/4
FLRE-2-1/2	95928	2.500	1.688	3.188	0.593	1.000	2.250	1.145	1-14	1.687	0.062	1.375	1.105	0.030	1.377	1.250	1.125	BB	1980	5190	2270	1400	2780	1770	14580	1340	3.0	FLRE-2-1/2
FLRE-2-1/2-4	97604	2.500	1.812	3.188	0.593	1.000	2.250	1.145	1-14	1.687	0.062	1.375	1.105	0.030	1.377	1.250	1.125	TRB	4570	10880	7630	4570	5340	3650	29920	N/A	3.0	FLRE-2-1/2-4
FLRE-2-3/4	95931	2.750	1.688	3.438	0.593	1.000	2.250	1.145	1-14	1.687	0.062	1.375	1.105	0.030	1.377	1.250	1.125	BB	1980	5190	2270	1400	2780	1770	14580	1340	3.5	FLRE-2-3/4
FLRE-3	95932	3.000	2.000	3.938	0.593	1.250	2.500	1.270	1 1/4-12	2.312	0.062	1.750	1.230	0.060	1.752	1.375	1.250	TRB	6000	14270	20000	12000	9980	6370	40500	N/A	5.1	FLRE-3
FLRE-3-1/4	95939	3.250	2.000	4.188	0.593	1.250	2.500	1.270	1 1/4-12	2.312	0.062	1.750	1.230	0.060	1.752	1.375	1.250	TRB	6000	14270	20000	12000	9980	6370	40500	N/A	5.8	FLRE-3-1/4
FLRE-3-1/2	95940	3.500	2.000	4.438	0.593	1.250	2.750	1.395	1 1/4-12	2.312	0.062	1.812	1.355	0.060	1.814	1.500	1.375	TRB	6000	14270	20000	12000	9980	6370	40500	N/A	6.8	FLRE-3-1/2
FLRE-4	95941	4.000	2.000	4.938	0.593	1.250	2.750	1.395	1 1/4-12	2.312	0.062	1.812	1.355	0.060	1.814	1.500	1.375	TRB	6000	14270	20000	12000	9980	6370	40500	N/A	8.5	FLRE-4
FLRE-4-1/2	95946	4.500	2.000	5.438	0.593	1.250	2.750	1.395	1 1/4-12	2.312	0.062	1.812	1.355	0.060	1.814	1.500	1.375	TRB	6000	14270	20000	12000	9980	6370	40500	N/A	10.5	FLRE-4-1/2
FLRE-5	95948	5.000	3.000	5.938	0.718	2.000	4.500	2.375	2-12	3.250	0.062	2.625	2.125	0.060	2.627	2.500	2.250	TRB	13990	33290	51900	32500	28300	17350	103670	N/A	19.5	FLRE-5
FLRE-6	95949	6.000	3.000	6.938	0.718	2.500	5.500	2.625	2-1/2-12	3.625	0.062	3.125	2.875	0.060	3.127	3.250	3.000	TRB	15060	35840	56400	33100	55320	33910	161990	N/A	32.0	FLRE-6

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

\*\*Lock washer and jam nut available, for size see N dimension.

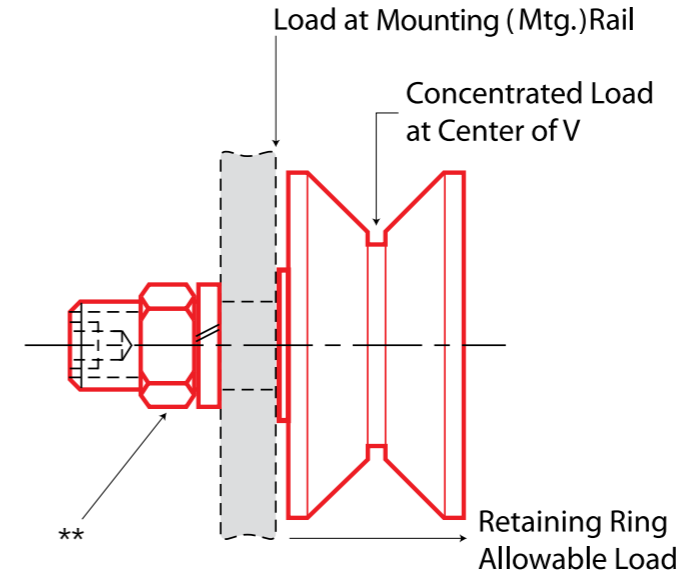
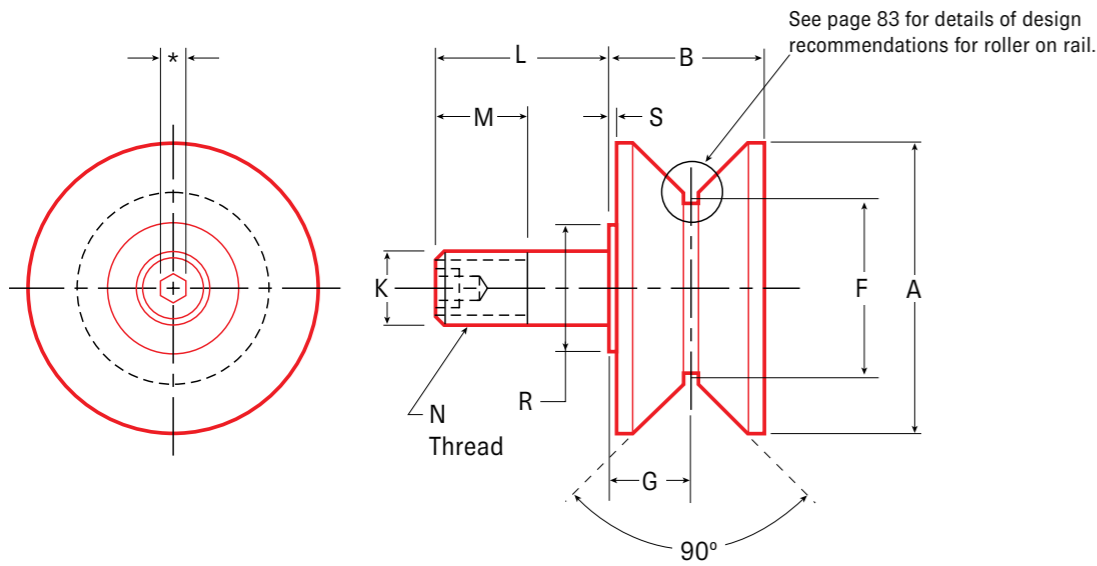
For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## V-Grooved - Concentric Stud Style, Inch Sizes



For metric sizes, please turn to page 36

Part No.	Item No.	A	B	F	G	K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (lbs)			Bearing Capacity, Static Thrust (lbs)	Stud Capacity (lbs)		Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.	
		Roller Dia	Roller Width	Point Dia	Groove Location	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM		Static Limit	Bending = 0.75 Sy	Shear = 0.75 x 0.5 x Sy							
VLR-1-1/2	97334	1.500	0.781	1.125	0.391	0.437	1.000	0.500	7/16-20	0.500	0.031	+0.001 -0.000	0.438	0.625	0.500	BB	240	630	230	140	370	1970	380	0.5	VLR-1-1/2
VLR-2	97335	2.000	0.844	1.375	0.422	0.500	1.250	0.625	1/2-20	0.625	0.031	+0.001 -0.000	0.500	0.750	0.625	BB	520	1350	600	370	920	3250	470	0.6	VLR-2
VLR-2-1/2	95660	2.500	1.312	1.500	0.687	0.750	1.750	0.875	3/4-16	1.000	0.062	+0.001 -0.000	0.751	1.250	1.000	BB	1050	2760	1100	680	1230	5780	470	1.3	VLR-2-1/2
VLR-3-1/2	95678	3.500	1.687	2.250	0.875	0.875	2.000	1.125	7/8-14	1.000	0.062	+0.001 -0.000	0.876	1.250	1.000	BB	1980	5190	2270	1400	3730	14580	1340	3.4	VLR-3-1/2
VLR-3-1/2-16	95685	3.500	2.000	2.250	0.875	0.750	2.000	1.125	3/4-16	1.250	0.062	+0.001 -0.000	0.751	1.250	1.000	TRB	3780	14270	7200	3150	3120	14580	N/A	3.4	VLR-3 1/2-16
VLR-4-1/2	95729	4.500	2.000	3.000	1.000	1.250	2.500	1.750	1 1/4-12	1.750	0.062	+0.001 -0.000	1.251	1.250	1.000	TRB	6000	14270	20000	12000	12660	40500	N/A	7.0	VLR-4-1/2
VLR-5-1/2	95760	5.500	2.000	4.000	1.000	1.250	2.750	1.750	1 1/4-12	1.750	0.062	+0.001 -0.000	1.251	1.500	1.250	TRB	6000	14270	20000	12000	12660	40500	N/A	10.5	VLR-5-1/2
VLR-6-1/2	95770	6.500	3.000	5.000	1.500	2.000	4.500	2.500	2-12	3.250	0.062	+0.001 -0.000	2.001	3.000	2.000	TRB	15060	35840	^46030	^23010	34880	103670	N/A	25.5	VLR-6-1/2
VLR-7-1/2	95777	7.500	3.000	6.000	1.500	2.500	5.500	3.250	2-1/2-12	3.250	0.062	+0.001 -0.000	2.501	3.250	2.250	TRB	15060	35840	^53860	^26930	68130	161990	N/A	37.0	VLR-7-1/2
VLR-8-1/2	95782	8.500	3.000	7.000	1.500	2.500	5.500	3.250	2-1/2-12	3.250	0.062	+0.001 -0.000	2.501	3.250	2.250	TRB	15060	35840	56400	^30850	68130	161990	N/A	46.0	VLR-8-1/2

^Surface strength of roller OD

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

\*\*Lock washer and jam nut available, for size see N dimension.

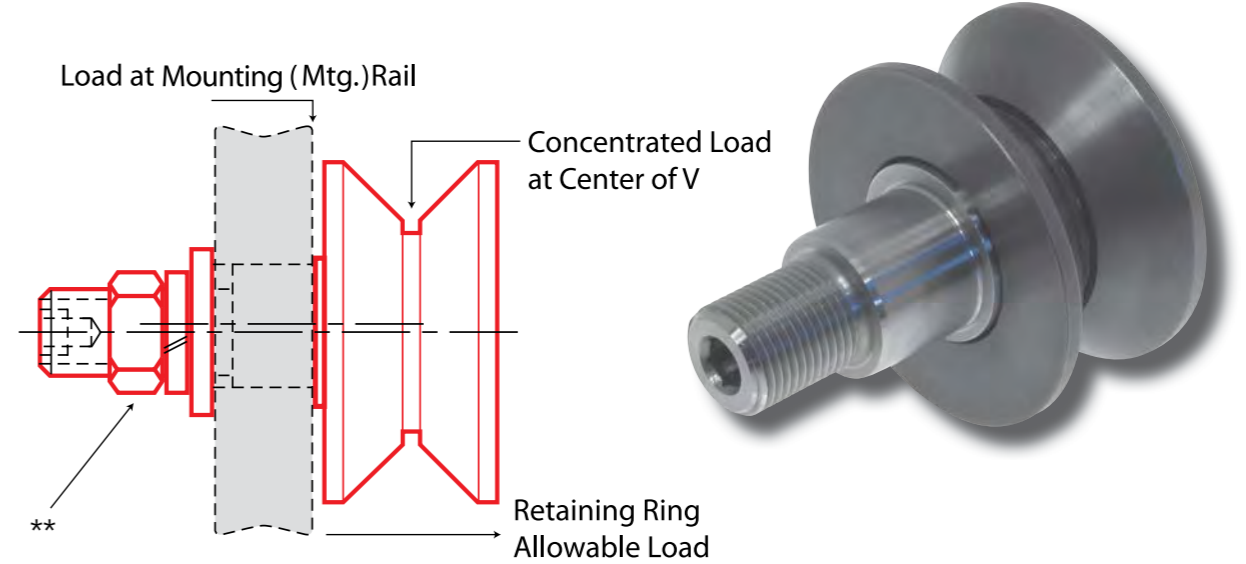
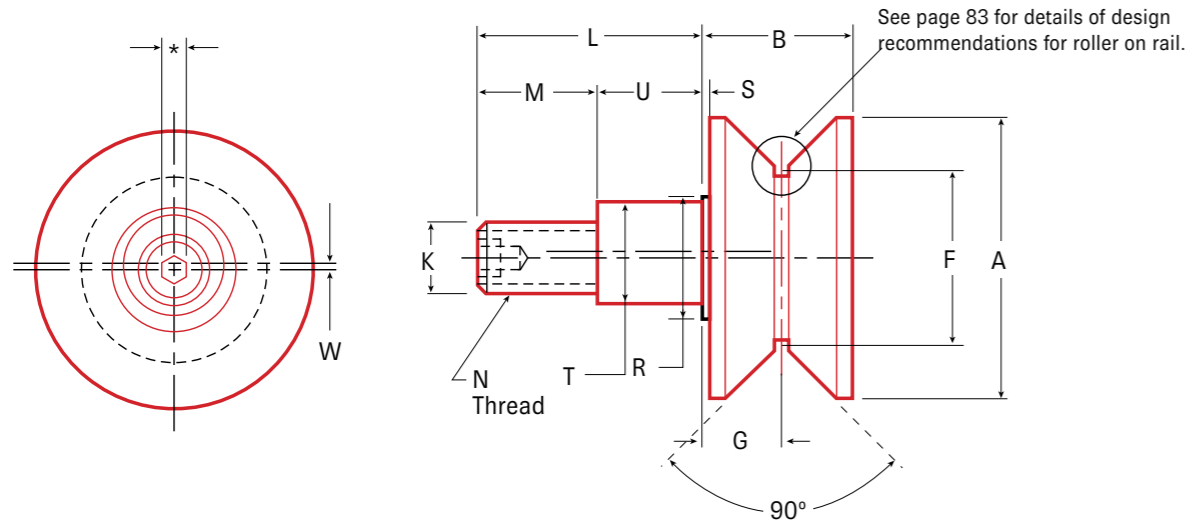
For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## V-Grooved - Eccentric Stud Style - Inch Sizes



For metric sizes, please turn to page 38

Part No.	Item No.	A Roller Dia	B Roller Width	F Point Dia	G Groove Location	K Stud Dia	L Stud Length	M Thread Length	N Thread	R Shoulder Dia	S Shoulder Length	T Eccentric Dia		U Eccentric Length	W Eccentricity	Rec. Mtg. Hole Size	Mounting Member Thickness		Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (lbs)			Bearing Capacity, Static Thrust (lbs)	Stud Capacity (lbs)		Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
												+0.001 -0.000	-0.010				Max	Min		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Static Limit		Bending= 0.75 Sy Bend @ V	Shear= 0.75 x 0.5 x Sy Load @ Mtg Rail			
<b>VLRE-1-1/2</b>	97336	1.500	0.781	1.125	0.391	0.437	1.000	0.500	7/16-20	0.750	0.031	0.625	0.500	0.030	0.627	0.625	0.500	BB	240	630	230	140	480	1970	380	0.5	<b>VLRE-1-1/2</b>	
<b>VLRE-2</b>	97337	2.000	0.844	1.375	0.422	0.500	1.250	0.625	1/2-20	0.812	0.031	0.687	0.625	0.030	0.689	0.750	0.625	BB	520	1350	600	370	920	3250	470	0.6	<b>VLRE-2</b>	
<b>VLRE-2-1/2</b>	95958	2.500	1.312	1.500	0.687	0.750	1.750	0.895	3/4-16	1.375	0.062	1.000	0.855	0.030	1.002	1.000	0.875	BB	1050	2760	1100	680	1230	5780	470	1.4	<b>VLRE-2-1/2</b>	
<b>VLRE-3-1/2</b>	95970	3.500	1.687	2.250	0.875	0.875	2.000	1.020	7/8-14	1.500	0.062	1.187	0.980	0.030	1.189	1.125	1.000	BB	1980	5190	2270	1400	3730	14580	1340	3.4	<b>VLRE-3-1/2</b>	
<b>VLRE-3-1/2-4</b>	95973	3.500	1.890	2.250	0.875	0.750	2.000	1.020	3/4-16	1.500	0.125	1.187	0.980	0.030	1.189	1.125	1.000	TRB	3780	14270	7200	3150	3120	14580	N/A	3.6	<b>VLRE-3-1/2-4</b>	
<b>VLRE-4-1/2</b>	95986	4.500	2.000	3.000	1.000	1.250	2.500	1.270	1-1/4-12	2.312	0.062	1.750	1.230	0.060	1.752	1.375	1.250	TRB	6000	14270	20000	12000	12820	40500	N/A	7.3	<b>VLRE-4-1/2</b>	
<b>VLRE-5-1/2</b>	95995	5.500	2.000	4.000	1.000	1.250	2.750	1.395	1-1/4-12	2.312	0.062	1.812	1.355	0.060	1.814	1.500	1.325	TRB	6000	14270	20000	12000	12820	40500	N/A	10.9	<b>VLRE-5-1/2</b>	
<b>VLRE-6-1/2</b>	95997	6.500	3.000	5.000	1.500	2.000	4.500	2.375	2-1/2	3.250	0.062	2.625	2.125	0.060	2.627	2.500	2.250	TRB	15060	35840	^46030	^23010	37300	103670	N/A	26.5	<b>VLRE-6-1/2</b>	
<b>VLRE-7-1/2</b>	90110	7.500	3.000	6.000	1.500	2.500	5.500	2.625	2-1/2-12	3.625	0.062	3.125	2.875	0.060	3.127	3.250	3.000	TRB	15060	35840	53860	^26930	72900	161990	N/A	39.5	<b>VLRE-7-1/2</b>	

^ Surface strength of roller OD

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

\*\*Lock washer and jam nut available, for size see N dimension.

For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

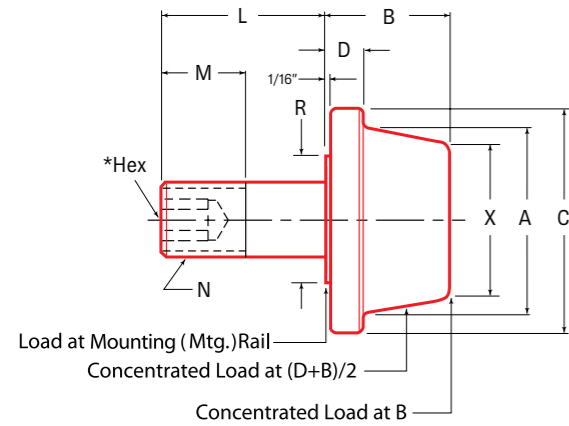
1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Flanged Crown Style - Concentric & Eccentric Stud Style, Inch Sizes

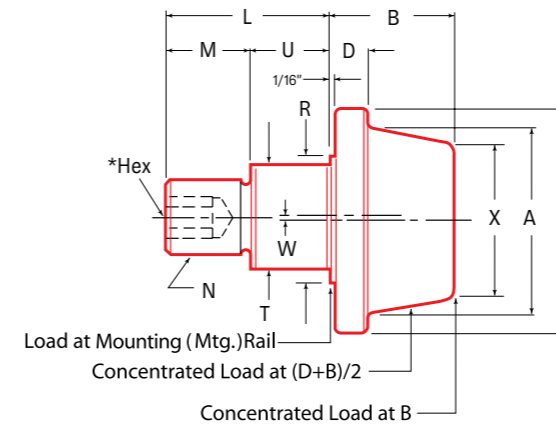


### Concentric (FLRC)



Designed to run on commercially available standard structural I-beams and channels.

### Eccentric (FLRCE)



Part No.	Item No.	A	B	C	D	K	L	M	N	R	T	U	W	X	Rec. Mtg. Hole Size	Mounting Member Thickness		Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (lbs)			Bearing Capacity, Static Thrust (lbs)	Stud Capacity (lbs)		Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.	
		Roller Dia	Roller Width	Flange Dia	Flange Thickness	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Eccentric Dia	Eccentric Length	Eccentricity	Minor Dia		Max	Min		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Static Limit		Bending=0.75 Sy					Shear=0.75 x 0.5 x Sy
											+0.001 -0.001	+0.000 -0.010											Concent. Load @ (D+B)/2	Concent. Load @ B				
<b>FLRC-2-1/2</b>	97531	2.500	1.688	3.000	0.500	1.000	2.250	1.500	1-14	1.250	N/A	N/A	N/A	2.062	1.001	1.250	0.750	BB	1980	5190	2270	1400	3930	1770	14580	1340	2.8	<b>FLRC-2-1/2</b>
<b>FLRC-3</b>	97533	3.000	1.812	3.938	0.593	1.000	2.250	1.500	1-14	1.250	N/A	N/A	N/A	2.562	1.001	1.250	0.750	TRB	4570	10890	7630	4570	6760	3520	25920	N/A	4.7	<b>FLRC-3</b>
<b>FLRC-4</b>	96057	4.000	2.000	4.938	0.593	1.250	2.750	1.750	1-1/4-12	1.750	N/A	N/A	N/A	3.312	1.251	1.250	1.000	TRB	6000	14270	20000	12000	13620	6330	40500	N/A	7.9	<b>FLRC-4</b>
<b>FLRCE-2-1/2</b>	96100	2.500	1.688	3.000	0.500	1.000	2.250	1.145	1-14	1.687	1.375	1.105	0.030	2.062	1.377	1.250	1.125	BB	1980	5190	2270	1400	3930	1770	14580	1340	3.0	<b>FLRCE-2-1/2</b>
<b>FLRCE-3</b>	97534	3.000	1.812	3.938	0.593	1.000	2.250	1.145	1-14	1.687	1.375	1.105	0.030	2.562	1.377	1.250	1.125	TRB	4570	10890	7630	4570	6760	3520	25920	N/A	5.1	<b>FLRCE-3</b>
<b>FLRCE-4</b>	97535	4.000	2.000	4.938	0.593	1.250	2.750	1.395	1-1/4-12	2.312	1.812	1.355	0.060	3.312	1.814	1.500	1.375	TRB	6000	14270	20000	12000	13620	6330	40500	N/A	8.5	<b>FLRCE-4</b>

For the above load calculations the radius at the end of tread is excluded.

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

Lock washer and jam nut available, for size see N dimension.

For special features and custom design considerations, see page 7.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

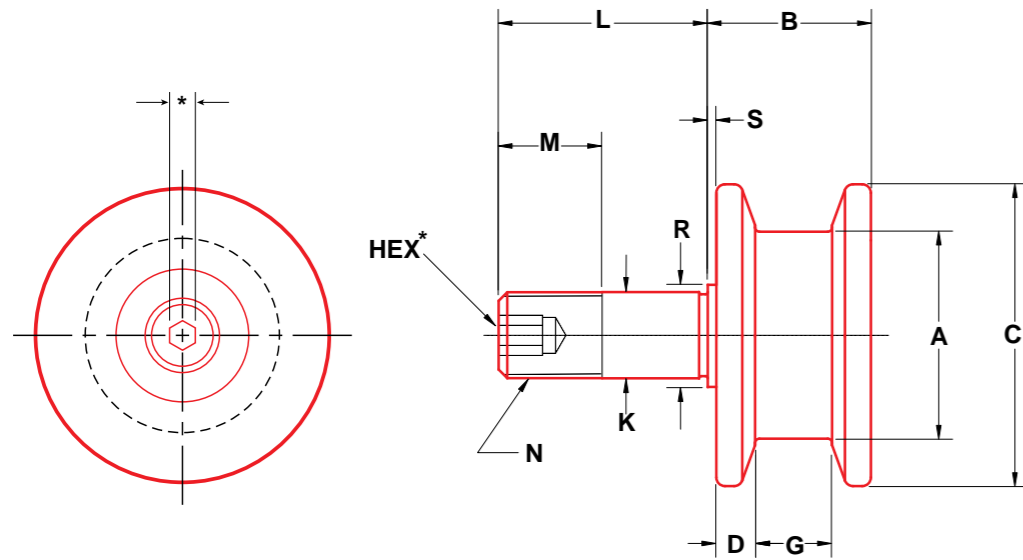
1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Double Flanged - Concentric Stud Style - Inch Sizes



**Load Runners®**



Part No.	Item No.	A	B	C	D	G	K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Ball or Tapered Roller Bearings	Bearing Capacity Radial Load (lbs)			Thrust Capacity, Static Limit (lbs)	Stud Capacity (lbs) Bending = 0.75 Sy Bending Concent. Load @ (B-S)/2+S	Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width	Flange Dia	Flange Thickness (Both Sides)	Groove Width	Stud Dia +0.000 -0.001	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length		Max	Min		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Radial Capacity Static Limit					
<b>FFLR-1-1/2-4</b>	90670	1.500	1-3/16	2-3/16	0.281	0.558	0.625	1-1/2	3/4	5/8-18	3/4	1/16	0.626	1	3/4	BB	1050	2760	1100	680	1374	470	0.9	<b>FFLR-1-1/2-4</b>
<b>FFLR-2-4</b>	90671	2.000	1-11/16	2-11/16	0.531	0.558	0.875	2	1-1/8	7/8-14	1	1/16	0.876	1-1/4	7/8	BB	1460	3826	1620	1000	3984	910	2.3	<b>FFLR-2-4</b>
<b>FFLR-2-1/2-4</b>	90672	2.500	1-11/16	3-3/16	0.531	0.562	1.000	2-1/4	1-1/2	1-14	1-1/4	1/16	1.001	1-1/4	3/4	BB	1979	5187	2268	1400	3694	1340	3.5	<b>FFLR-2-1/2-4</b>
<b>FFLR-3-4</b>	90673	3.000	2	3-15/16	0.531	0.874	1.250	2-1/2	1-3/4	1-1/4-12	1-3/4	1/16	1.251	1-1/4	1	TRB	5990	14270	12263	12000	12260	N/A	6.0	<b>FFLR-3-4</b>

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.

Assemblies are provided with lock washer and jam nut.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.

1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Stainless Steel

### Concentric Stud Plain Style, Flanged, V-Grooved - Inch Sizes



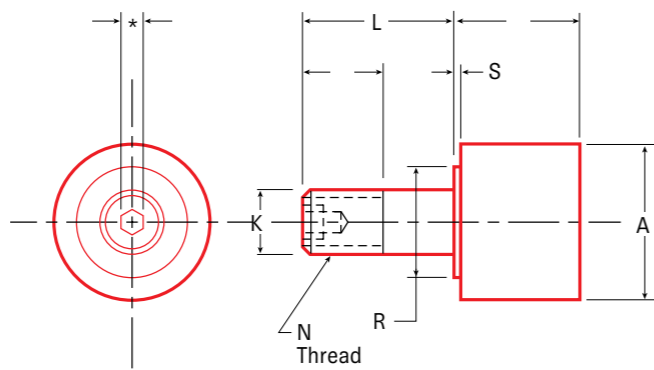
Use where corrosive or other conditions make standard steel rollers unsuitable.

- All-stainless construction
- Corrosion resistant
- Tread 440C & hardened to 55-60Rc
- Stud & cap 300 grade stainless steel

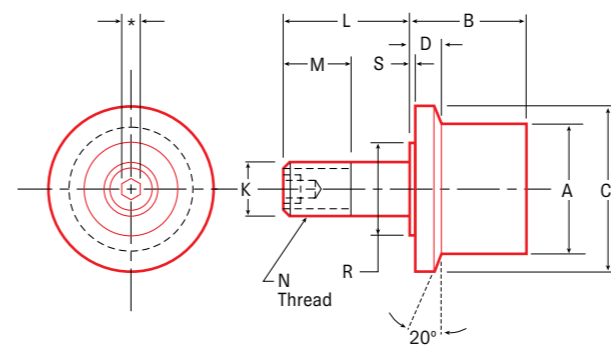
**Applications:**

- Chemical Treatment
- Tank Building
- Food Processing
- Aerospace
- Marine
- Waste Treatment
- Pharmaceutical

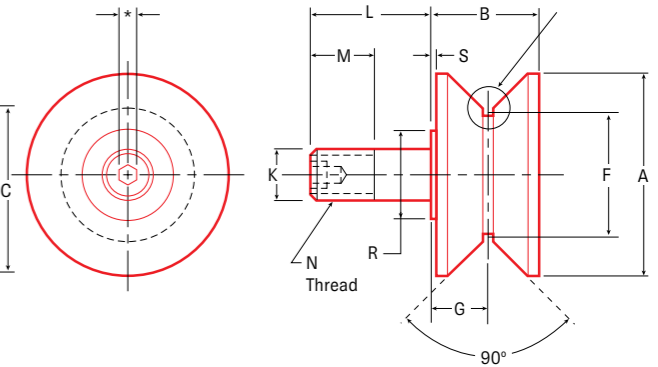
**Plain Concentric Stud**



**Flanged Concentric Stud**



**V-Grooved Concentric Stud**



See page 83 for details of design recommendations for roller on rail.

**PLAIN**

**PLAIN**

Part No.	Item No.	A	B	K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity Radial Load (lbs)			Thrust Capacity, Static Limit (lbs)	Stud Capacity (lbs)			Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Radial Static Limit	Bending=0.75 Sy			Shear=0.75 x 0.5 x Sy					
		+0.000 -0.001		+0.000 -0.001										Bend @B/2	Bend @ End of Roller							
<b>PLRS-1</b>	97734	1.000	0.781	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	350	920	390	240	190	80	780	150	0.3	<b>PLRS-1</b>
<b>PLRS-1-1/4</b>	97735	1.250	0.844	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	480	1250	520	320	350	160	1290	230	0.3	<b>PLRS-1-1/4</b>
<b>PLRS-1-1/2</b>	97736	1.500	1.187	0.625	1.500	0.750	5/8-18	0.750	0.062	0.626	1.000	0.750	940	2470	1110	690	550	260	2300	350	0.5	<b>PLRS-1-1/2</b>
<b>PLRS-1-3/4</b>	90341	1.750	1.187	0.750	1.750	0.875	3/4-16	1.000	0.062	0.751	1.125	0.875	940	2470	1110	690	550	260	2300	350	0.8	<b>PLRS-1-3/4</b>
<b>PLRS-2</b>	97737	2.000	1.687	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	1330	3480	1750	1080	1590	600	4620	740	1.3	<b>PLRS-2</b>
<b>PLRS-2-1/2</b>	97738	2.500	1.687	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	1330	3480	1750	1080	1590	600	4620	740	2.3	<b>PLRS-2-1/2</b>

**FLANGED**

**FLANGED**

Part No.	Item No.	A	B	C	D	K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity Radial Load (lbs)			Thrust Capacity, Static Limit (lbs)	Stud Capacity (lbs)			Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width	Flange Dia	Flange Thickness	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Radial Static Limit	Bending=0.75 Sy			Shear=0.75 x 0.5 x Sy					
		+0.000 -0.001														Bend @ (D+B)/2	Bend @ End of Roller							
<b>FLRS-1</b>	97739	1.000	0.781	1.375	0.219	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	350	920	390	240	150	80	780	150	0.4	<b>FLRS-1</b>
<b>FLRS-1-1/4</b>	97740	1.250	0.844	1.563	0.219	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	480	1250	520	320	280	160	1290	230	0.5	<b>FLRS-1-1/4</b>
<b>FLRS-1-1/2</b>	97741	1.500	1.188	2.188	0.343	0.625	1.500	0.750	5/8-18	0.750	0.062	0.626	1.000	0.750	940	2470	1110	690	440	260	2300	350	0.8	<b>FLRS-1-1/2</b>
<b>FLRS-2</b>	97742	2.000	1.688	2.688	0.593	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	1330	3480	1750	1080	1050	600	4620	740	2.0	<b>FLRS-2</b>
<b>FLRS-2-1/2</b>	97743	2.500	1.688	3.188	0.593	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	1330	3480	1750	1080	1050	600	4620	740	3.0	<b>FLRS-2-1/2</b>

**V-GROOVED**

**V-GROOVED**

Part No.	Item No.	A	B	F	G	K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity Radial Load (lbs)			Thrust Capacity, Static Limit (lbs)	Stud Capacity (lbs)		Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width	Point Dia	Groove Location	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Radial Static Limit	Bending = 0.75 Sy @ Center of V			Shear = 0.75 x 0.5 x Sy				
		+0.000 -0.001																					
<b>VLRS-1-1/2</b>	97994	1.5	0.781	1.125	0.391	0.437	1	0.5	7/16-20	0.5	0.031	0.438	0.75	0.625	350	920	390	240	200	780	150	0.6	<b>VLRS-1-1/2</b>
<b>VLRS-2</b>	97995	2	0.844	1.375	0.422	0.5	1.25	0.625	1/2-20	0.625	0.031	0.5	0.875	0.75	480	1250	520	320	370	1290	230	0.8	<b>VLRS-2</b>
<b>VLRS-2-1/2</b>	97996	2.5	1.312	1.5	0.687	0.75	1.75	0.875	3/4-16	1	0.062	0.751	1.25	1	940	2470	1110	690	490	2300	350	1.6	<b>VLRS-2-1/2</b>

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89. Assemblies are provided with lock washer and jam nut.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Stainless Steel

### Eccentric Stud Plain Style, Flanged, V-Grooved - Inch Sizes

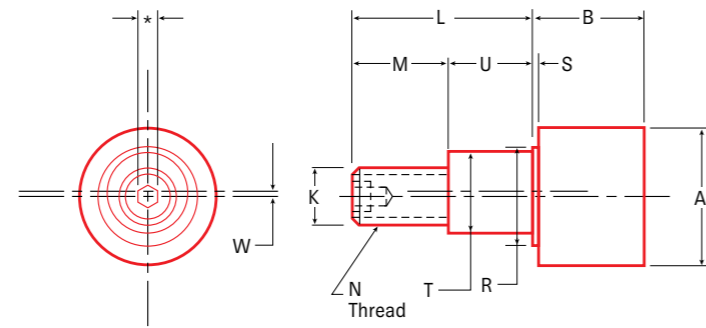
Use where corrosive or other conditions make standard steel rollers unsuitable.

- All-stainless construction
- Corrosion resistant
- Tread 440C & hardened to 55-60Rc
- Stud & cap 300 grade stainless steel

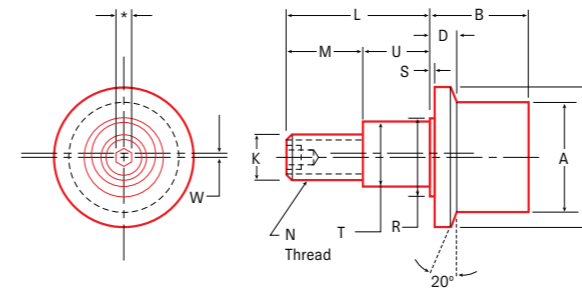
**Applications:**

- Chemical Treatment
- Tank Building
- Food Processing
- Aerospace
- Marine
- Waste Treatment
- Pharmaceutical

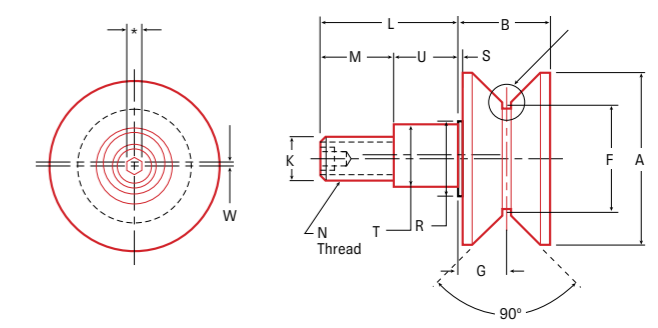
**Plain Eccentric Stud**



**Flanged Eccentric Stud**



**V-Grooved Eccentric Stud**



See page 83 for details of design recommendations for roller on rail.

**PLAIN**

**PLAIN**

Part No.	Item No.	A	B	K	L	M	N	R	S	T	U	W	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity Radial Load (lbs)			Thrust Capacity, Static Limit (lbs)	Stud Capacity (lbs)			Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length	Eccentric Dia	Eccentric Length	Eccentricity		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Radial Static Limit	Bending=0.75 Sy	Shear=0.75 x 0.5 x Sy							
		+0.000 -0.001								+0.001 -0.001	+0.000 -0.010					Bend @ B/2	Bend @ End of Roller								
PLRSE-1	97896	1.000	0.781	0.437	1.000	0.500	7/16-20	0.750	0.031	0.625	0.500	0.030	0.627	0.625	0.500	350	920	390	240	190	80	780	150	0.4	PLRSE-1
PLRSE-1-1/4	97897	1.250	0.844	0.500	1.250	0.625	1/2-20	0.812	0.031	0.687	0.625	0.030	0.689	0.750	0.625	480	1250	520	320	350	160	1290	230	0.5	PLRSE-1-1/4
PLRSE-1-1/2	97898	1.500	1.188	0.625	1.500	0.770	5/8-18	1.125	0.062	0.875	0.730	0.030	0.877	0.875	0.750	940	2470	1110	690	550	260	2300	350	0.7	PLRSE-1-1/2
PLRSE-1-3/4	90241	1.750	1.188	0.750	1.750	0.875	3/4-16	1.240	0.062	1.000	0.855	0.030	1.002	1.000	0.875	940	2470	1110	690	550	260	2300	350	1.0	PLRSE-1-3/4
PLRSE-2	97899	2.000	1.688	0.875	2.000	1.020	7/8-14	1.500	0.062	1.187	0.980	0.030	1.189	1.125	1.000	1330	3480	1750	1080	1610	600	4620	740	1.9	PLRSE-2
PLRSE-2-1/2	97900	2.500	1.688	1.000	2.250	1.145	1-14	1.687	0.062	1.375	1.105	0.030	1.377	1.250	1.125	1330	3480	1750	1080	1600	600	4620	740	3.0	PLRSE-2-1/2

**FLANGED**

**FLANGED**

Part No.	Item No.	A	B	C	D	K	L	M	N	R	S	T	U	W	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity Radial Load (lbs)			Thrust Capacity, Static Limit (lbs)	Stud Capacity (lbs)			Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width	Flange Dia	Flange Thick-ness	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length	Eccentric Dia	Eccentric Length	Eccentricity		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Radial Static Limit	Bending=0.75 Sy	Shear=0.75 x 0.5 x Sy							
		+0.001 -0.001										+0.001 -0.001	+0.000 -0.010						Bend @ (D+B)/2	Bend @ End of Roller							
FLRSE-1	97965	1.000	0.781	1.375	0.219	0.437	1.000	0.500	7/16-20	0.750	0.031	0.625	0.500	0.030	0.627	0.625	0.500	350	920	390	240	150	80	780	150	0.5	FLRSE-1
FLRSE-1-1/4	97966	1.250	0.844	1.563	0.219	0.500	1.250	0.625	1/2-20	0.812	0.031	0.687	0.625	0.030	0.689	0.750	0.625	480	1250	520	320	280	160	1290	230	0.7	FLRSE-1-1/4
FLRSE-1-1/2	97967	1.500	1.188	2.188	0.343	0.625	1.500	0.770	5/8-18	1.125	0.062	0.875	0.730	0.030	0.877	0.875	0.750	940	2470	1110	690	440	260	2300	350	0.8	FLRSE-1-1/2
FLRSE-2	97968	2.000	1.688	2.688	0.593	0.875	2.000	1.020	7/8-14	1.500	0.062	1.187	0.980	0.030	1.189	1.125	1.000	1330	3480	1750	1080	1050	600	4620	740	2.0	FLRSE-2
FLRSE-2-1/2	97969	2.500	1.688	3.188	0.593	1.000	2.250	1.145	1-14	1.687	0.062	1.375	1.105	0.030	1.377	1.250	1.125	1330	3480	1750	1080	1060	600	4620	740	3.0	FLRSE-2-1/2

**V-GROOVED**

**V-GROOVED**

Part No.	Item No.	A	B	F	G	K	L	M	N	R	S	T	U	W	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity Radial Load (lbs)			Thrust Capacity, Static Limit (lbs)	Stud Capacity (lbs)		Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width	Point Dia	Groove Location	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length	Eccentric Dia	Eccentric Length	Eccentricity		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Radial Static Limit	Bending = 0.75 Sy @ Center of V	Shear = 0.75 x 0.5 x Sy						
		+0.001 -0.001										+0.001 -0.001	+0.000 -0.010													
VLRSE-1-1/2	97997	1.500	0.781	1.125	0.391	0.437	1.000	0.500	7/16-20	0.750	0.031	0.625	0.500	0.03	0.627	0.625	0.500	350	920	390	240	190	780	150	1.0	VLRSE-1-1/2
VLRSE-2	97998	2.000	0.844	1.375	0.422	0.5	1.250	0.625	1/2-20	0.812	0.031	0.687	0.625	0.03	0.689	0.750	0.625	480	1250	520	320	370	1290	230	1.2	VLRSE-2
VLRSE-2-1/2	97999	2.500	1.312	1.500	0.687	0.75	1.750	0.875	3/4-16	1.240	0.062	1.000	0.855	0.03	1.002	1.000	0.875	940	2470	1110	690	490	2300	350	1.6	VLRSE-2-1/2

Other sizes available upon request.  
\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.  
Assemblies are provided with lock washer and jam nut.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
1 kg = 9,81 N = 2,21 lbs



# LOAD RUNNERS

## High Temp Concentric Stud Plain Style, Flanged, V-Grooved - Inch Sizes



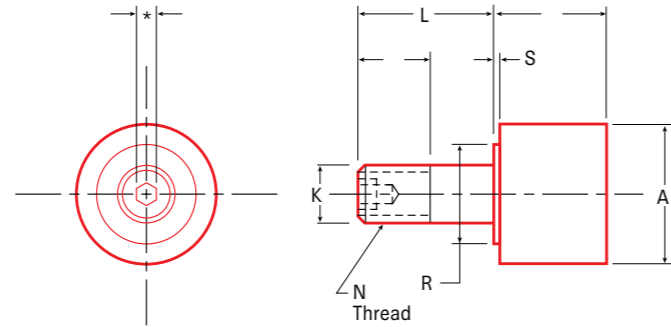
For ovens, galvanizing lines, heat treat furnaces, and industrial dryers.

- Resists 325°F / 162°C Max (continuous) High Temp Seals and Lubricants

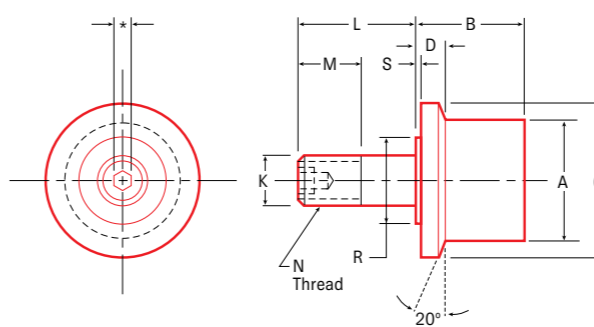
### Applications:

- Paper Mills
- Steel Mills
- Aluminum Mills
- Foundries
- Food Processing
- Aerospace

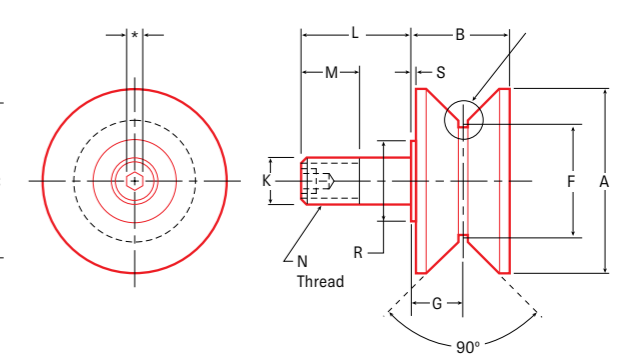
Plain Concentric Stud



Flanged Concentric Stud



V-Grooved Concentric Stud



See page 83 for details of design recommendations for roller on rail.

### PLAIN

### PLAIN

Part No.	Item No.	A		K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity Radial Load (lbs)			Thrust Capacity, Static Limit (lbs)	Stud Capacity (lbs)			Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width								3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Radial Static Limit	Bending=0.75 Sy			Shear=0.75 x 0.5 x Sy					
		+0.000 -0.001	+0.000 -0.001											Bend @ End of Roller	Bend @ B/2							
PLRH-1	97724	1.000	0.781	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	350	920	390	240	210	480	1970	380	0.2	PLRH-1
PLRH-1-1/4	97725	1.250	0.844	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	480	1250	520	320	390	880	3250	470	0.3	PLRH-1-1/4
PLRH-1-1/2	97726	1.500	1.187	0.625	1.500	0.750	5/8-18	0.750	0.062	0.626	1.000	0.750	940	2470	1110	690	650	1390	5780	470	0.4	PLRH-1-1/2
PLRH-2	97727	2.000	1.687	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	1330	3480	1750	1080	1500	4010	11610	910	1.3	PLRH-2
PLRH-2-1/2	97728	2.500	1.687	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	1330	3480	1750	1080	1500	4010	11610	910	2.3	PLRH-2-1/2

### FLANGED

### FLANGED

Part No.	Item No.	A		C	D	K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity Radial Load (lbs)			Thrust Capacity, Static Limit (lbs)	Stud Capacity (lbs)			Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width										3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Radial Static Limit	Bending=0.75 Sy			Shear=0.75 x 0.5 x Sy					
		+0.000 -0.001	+0.000 -0.001													Bend @ End of Roller	Bend @ D+B/2							
FLRH-1	97729	1.000	0.781	1.375	0.219	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	350	920	390	240	210	370	1970	380	0.3	FLRH-1
FLRH-1-1/4	97730	1.250	0.844	1.563	0.219	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	480	1250	520	320	390	710	3250	470	0.4	FLRH-1-1/4
FLRH-1-1/2	97731	1.500	1.188	2.188	0.343	0.625	1.500	0.750	5/8-18	0.750	0.062	0.626	1.000	0.750	940	2470	1110	690	810	1100	5780	470	0.6	FLRH-1-1/2
FLRH-2	97732	2.000	1.688	2.688	0.593	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	1330	3480	1750	1080	1500	2640	11610	910	1.8	FLRH-2
FLRH-2-1/2	97733	2.500	1.688	3.188	0.593	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	1330	3480	1750	1080	1500	2650	11610	910	2.8	FLRH-2-1/2

### V-GROOVED

### V-GROOVED

Part No.	Item No.	A		F	G	K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity Radial Load (lbs)			Thrust Capacity, Static Limit (lbs)	Stud Capacity (lbs)		Retaining Ring Capacity (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width										3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Radial Static Limit	Bending = 0.75 Sy @ Center of V			Shear = 0.75 x 0.5 x Sy				
		+0.000 -0.001	+0.000 -0.001													Bend @ Center of V	Bend @ Center of V						
VLRH-1-1/2	90048	1.50	0.781	1.125	0.391	0.437	1.00	0.500	7/16-20	0.500	0.031	0.438	0.750	0.625	350	920	390	240	500	1970	380	0.5	VLRH-1-1/2
VLRH-2	90072	2.00	0.844	1.375	0.422	0.50	1.25	0.625	1/2-20	0.625	0.031	0.500	0.875	0.750	480	1250	520	320	920	3250	470	0.6	VLRH-2
VLRH-2-1/2	90049	2.50	1.312	1.500	0.687	0.75	1.75	0.875	3/4-16	1.000	0.062	0.751	1.250	1.000	940	2470	1110	690	1310	6230	470	14	VLRH-2-1/2

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89. Assemblies are provided with lock washer and jam nut.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING. 1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Nylon Tread Concentric & Eccentric Stud Plain Style - Inch Sizes



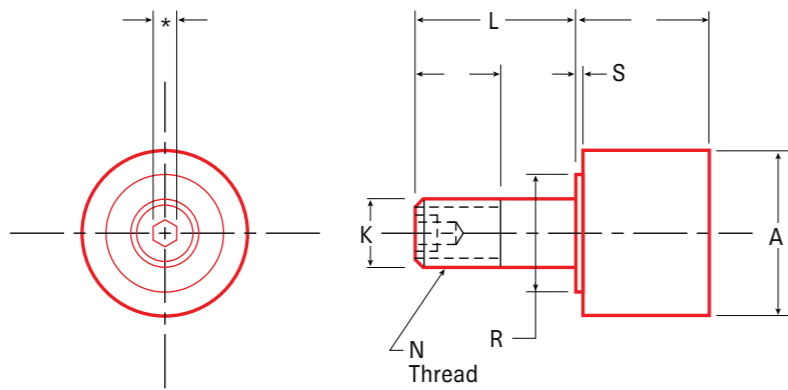
Cost-effective performance in applications requiring a non-metallic outer face.

- Seals out contamination
- Non-sparking
- Non-marking

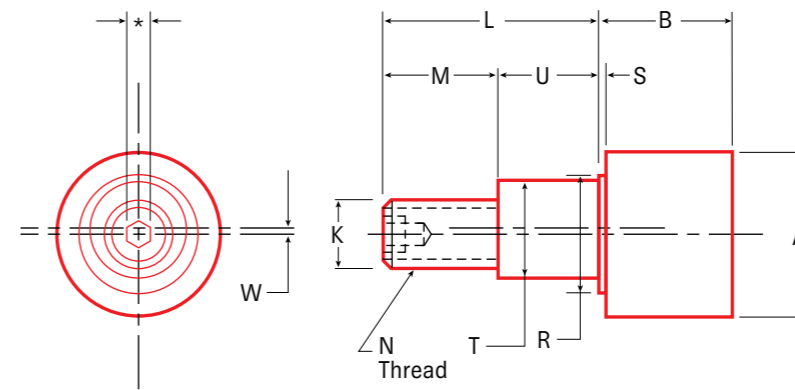
Applications:

- Racking & Storage Retrieval Systems
- Food Processing
- Postal Systems
- Medical Equipment

Concentric Stud Style



Eccentric Stud Style



CONCENTRIC STUD STYLE

CONCENTRIC STUD STYLE

Part No.	Item No.	A	B	K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity, Radial Load (lbs)			Bearing Capacity, Static Thrust (lbs)	Retaining Ring Capacity (lbs)	Tread Capacity Static Limit (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length		Max	Min	3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33 1/3 RPM	Static Limit					
		+0.000 -0.001		+0.000 -0.001																
PLRN-1	97749	1.000	0.781	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	240	630	230	140	280	30	0.2	PLRN-1
PLRN-1-1/4	97750	1.250	0.844	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	520	1350	600	370	470	40	0.25	PLRN-1-1/4
PLRN-1-1/2	97751	1.500	1.187	0.625	1.500	0.750	5/8-18	0.750	0.062	0.626	1.000	0.750	1050	2760	1100	680	470	60	0.5	PLRN-1-1/2
PLRN-2	97752	2.000	1.687	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	1460	3830	1620	1000	910	120	1.1	PLRN-2
PLRN-2-1/2	97753	2.500	1.687	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	1980	5190	2270	1400	1340	130	1.6	PLRN-2-1/2

ECCENTRIC STUD STYLE

ECCENTRIC STUD STYLE

Part No.	Item No.	A	B	K	L	M	N	R	S	T	U	W	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Capacity Radial Load (lbs)			Bearing Static Thrust Capacity (lbs)	Retaining Ring Capacity (lbs)	Tread Capacity Static Limit (lbs)	Approx Weight (lbs)	Part No.
		Roller Dia	Roller Width	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Dia	Shoulder Length	Eccentric Dia	Eccentric Length	Eccentricity		Max	Min	3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Static Limit					
		+0.000 -0.001								+0.001 -0.001	+0.000 -0.010												
PLRNE-1	97891	1.000	0.781	0.437	1.000	0.500	7/16-20	0.750	0.031	0.625	0.500	0.030	0.627	0.625	0.500	240	630	230	140	280	30	0.2	PLRNE-1
PLRNE-1-1/4	97892	1.250	0.844	0.500	1.250	0.625	1/2-20	0.812	0.031	0.687	0.625	0.030	0.689	0.750	0.625	520	1350	600	370	470	40	0.3	PLRNE-1-1/4
PLRNE-1-1/2	97893	1.500	1.187	0.625	1.500	0.770	5/8-18	1.125	0.062	0.875	0.730	0.030	0.877	0.875	0.750	1050	2760	1100	680	470	60	1.1	PLRNE-1-1/2
PLRNE-2	97894	2.000	1.687	0.875	2.000	1.020	7/8-14	1.500	0.062	1.187	0.980	0.030	1.189	1.125	1.000	1460	3830	1620	1000	910	120	1.4	PLRNE-2
PLRNE-2-1/2	97895	2.500	1.687	1.000	2.250	1.145	1-14	1.687	0.062	1.375	1.105	0.030	1.377	1.250	1.125	1980	5190	2270	1400	1340	130	1.9	PLRNE-2-1/2

Other sizes available upon request.

\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.  
Assemblies are provided with lock washer and jam nut.

LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Urethane Tread Concentric Stud Plain Style - Inch Sizes



# LOAD RUNNERS

## Urethane Tread Eccentric - Inch Sizes

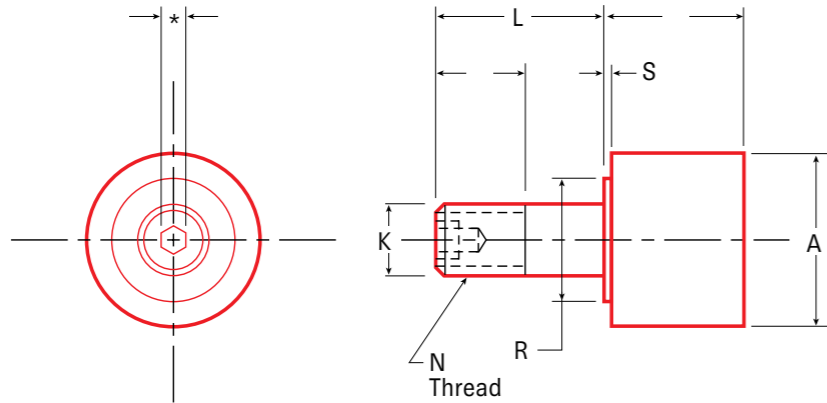
Concentric Stud Style

Proven in special applications calling for a wear-resistant, non-metallic rolling surface.

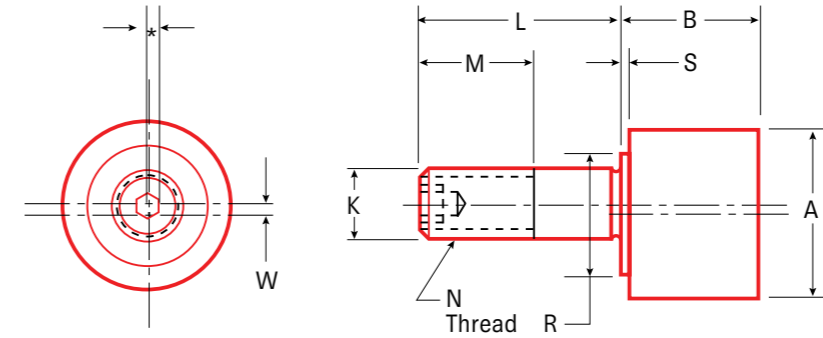
- Impact resistant
- Reduced track wear
- Outdoor durability

Applications:

- Medical Equipment
- Construction Sites
- Postage Systems



Eccentric Stud Style



### CONCENTRIC

Part No.	Item No.	A	B	K	L	M	N	R	S	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Radial Capacity (lbs) 3000 hrs L10 life @ 100 RPM	Tread Capacity Static Limit (lbs)	Tread Speed Limit (RPM)	Approx Weight (lbs)
											Max	Min				
PLRU-1	97744	1.000	0.781	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	230	80	300	0.20
PLRU-1-1/8	97824	1.125	0.781	0.437	1.000	0.500	7/16-20	0.500	0.031	0.438	0.625	0.500	230	80	260	0.20
PLRU-1-1/4	97745	1.250	0.843	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	240	110	320	0.30
PLRU-1-3/8	97825	1.375	0.843	0.500	1.250	0.625	1/2-20	0.625	0.031	0.501	0.750	0.625	240	140	310	0.30
PLRU-1-1/2	97746	1.500	1.187	0.625	1.500	0.750	5/8-18	0.750	0.062	0.626	1.000	0.750	520	170	310	0.35
PLRU-1-3/4	97826	1.750	1.187	0.750	1.750	0.875	3/4-16	0.875	0.062	0.751	1.125	0.875	520	250	360	0.70
PLRU-2	97747	2.000	1.687	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	1050	340	360	1.00
PLRU-2-1/4	97827	2.250	1.687	0.875	2.000	1.125	7/8-14	1.000	0.062	0.876	1.250	0.875	1050	430	370	1.50
PLRU-2-1/2	97748	2.500	1.687	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	1980	410	400	2.00
PLRU-2-3/4	97828	2.750	1.687	1.000	2.250	1.500	1-14	1.250	0.062	1.001	1.250	0.750	1980	420	850	3.00

### ECCENTRIC

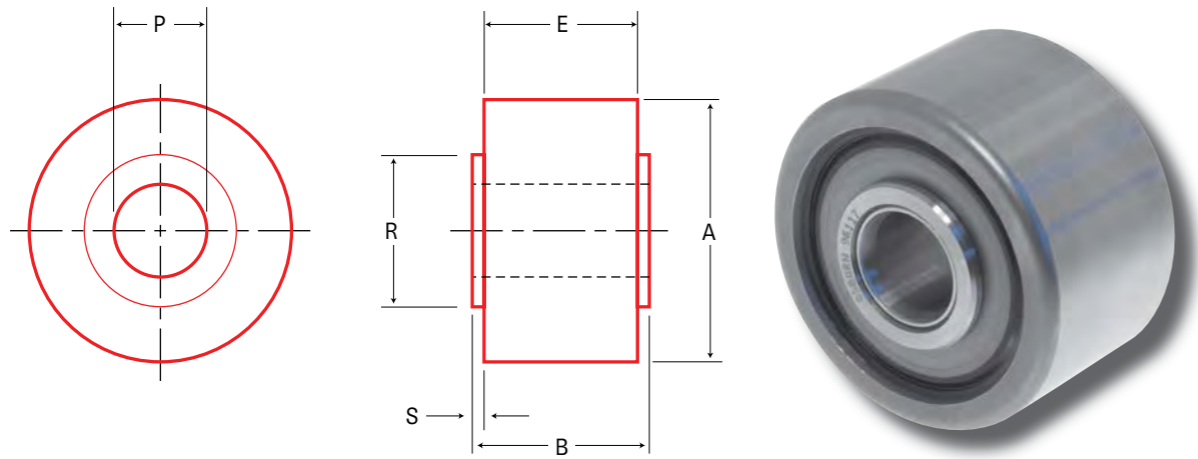
Part No.	Item No.	A	B	K	L	M	N	R	S	W	Rec. Mtg. Hole Size	Mounting Member Thickness		Bearing Radial Capacity (lbs) 3000 hrs L10 life @ 100 RPM	Tread Capacity Static Limit (lbs)	Tread Speed Limit (RPM)	Approx Weight (lbs)
												Max	Min				
PLRUE-1	97881	1.000	0.781	0.437	1.000	0.500	7/16-20	0.500	0.031	0.030	0.439	0.625	0.500	230	80	300	0.30
PLRUE-1-1/8	97882	1.125	0.781	0.437	1.000	0.500	7/16-20	0.500	0.031	0.030	0.439	0.625	0.500	230	80	260	0.30
PLRUE-1-1/4	97883	1.250	0.843	0.500	1.250	0.625	1/2-20	0.625	0.031	0.030	0.502	0.750	0.625	240	110	320	0.30
PLRUE-1-3/8	97884	1.375	0.843	0.500	1.250	0.625	1/2-20	0.625	0.031	0.030	0.502	0.750	0.625	240	140	310	0.30
PLRUE-1-1/2	97885	1.500	1.187	0.625	1.500	0.750	5/8-18	0.750	0.062	0.030	0.627	1.000	0.750	520	170	310	0.50
PLRUE-1-3/4	97886	1.750	1.187	0.750	1.750	0.750	3/4-16	0.875	0.062	0.030	0.752	1.125	0.875	520	250	360	1.00
PLRUE-2	97887	2.000	1.687	0.875	2.000	1.125	7/8-14	1.000	0.062	0.030	0.877	1.250	0.875	1050	340	360	1.20
PLRUE-2-1/4	97888	2.250	1.687	0.875	2.000	1.125	7/8-14	1.000	0.062	0.030	0.877	1.250	0.875	1050	430	370	1.50
PLRUE-2-1/2	97889	2.500	1.687	1.000	2.250	1.500	1-14	1.250	0.062	0.030	1.002	1.250	0.750	1980	410	400	2.00
PLRUE-2-3/4	97890	2.750	1.687	1.000	2.250	1.500	1-14	1.250	0.062	0.030	1.002	1.250	0.750	1980	420	850	2.10

Other sizes available upon request.  
\*Refer to stud hex socket size and INSTALLATION NOTES on pages 87-89.  
Assemblies are provided with lock washer and jam nut.

Urethane rollers include jam nut and lock washer.  
LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Plain Yoke Style - Inch Sizes



For metric sizes, please turn to page 40

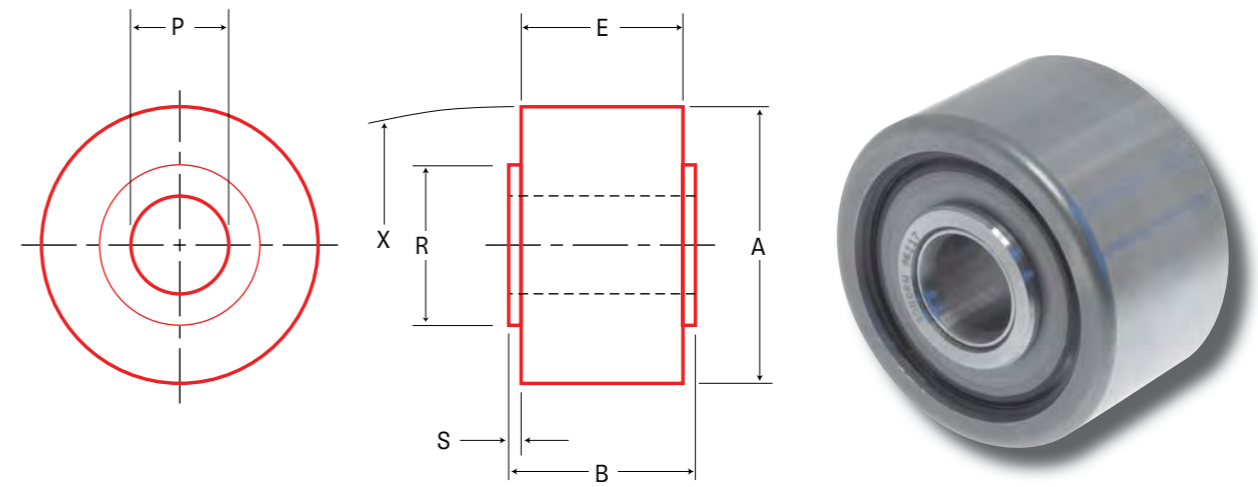
Part No.	Item No.	A			P		R	S	Ball or Tapered Roller Bearing	Bearing Capacity Radial Load (lbs)			Bearing Static Thrust Capacity (lbs)	Approx Weight (lbs)
		Roller Dia	Roller Width	Tread Width	Bore					3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Static Limit		
					Nom	Tol								
PLRY-1-1/2	90254	1.500	0.937	0.875	0.437	0.875	0.031	BB	710	1850	780	480	0.3	
PLRY-1-3/4	90255	1.750	1.063	1.000	0.500	1.000	0.031	BB	710	1850	780	480	0.7	
PLRY-2	90256	2.000	1.313	1.250	0.625	1.125	0.031	BB	1300	3400	1810	1120	0.9	
PLRY-2-1/4	90257	2.250	1.313	1.250	0.625	1.125	0.031	BB	1300	3400	1810	1120	1.4	
PLRY-2-1/2	96117	2.500	1.562	1.500	0.750	1.250	0.031	TRB	4570	10880	7630	4570	2.0	
PLRY-2-1/2-7	90107	2.500	1.562	1.500	0.750	1.250	0.031	BB	2130	5590	2530	1560	2.0	
PLRY-2-3/4-7	90108	2.750	1.562	1.500	0.750	1.250	0.031	BB	2130	5590	2530	1560	2.3	
PLRY-3	96118	3.000	1.812	1.750	1.000	1.750	0.031	TRB	6000	14270	20000	12000	2.6	
PLRY-3-1/4	96133	3.250	1.812	1.750	1.000	1.750	0.031	TRB	6000	14270	20000	12000	3.4	
PLRY-3-1/2	96138	3.500	2.062	2.000	1.125	2.000	0.031	TRB	7390	17590	27200	13100	4.2	
PLRY-4	96144	4.000	2.312	2.250	1.250	2.250	0.031	TRB	7390	17590	27200	13100	6.6	
PLRY-5	96154	5.000	2.875	2.750	1.750	3.250	0.062	TRB	13990	33290	51900	32500	11.3	
PLRY-6	96165	6.000	3.375	3.250	2.250	3.500	0.062	TRB	15060	35840	56400	33100	19.4	
PLRY-7	96177	7.000	3.875	3.750	2.750	4.250	0.062	TRB	17830	42430	79800	48400	29.3	
PLRY-8	96184	8.000	4.500	4.250	3.255	4.750	0.125	TRB	35250	83890	159800	110000	43.9	
PLRY-9	96194	9.000	5.000	4.750	3.755	5.500	0.125	TRB	56400	134230	250000	147000	51.6	
PLRY-10	96197	10.000	5.500	5.250	4.255	6.500	0.125	TRB	58080	138240	276000	196000	80.0	

Other sizes available upon request  
 For HEAVY DUTY SHAFTS see pages 74-75  
 Refer to INSTALLATION NOTES on pages 87-89  
 LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
 1 kg = 9,81 N = 2,21 lbs



# LOAD RUNNERS

## Crowned Yoke Style - Inch Sizes



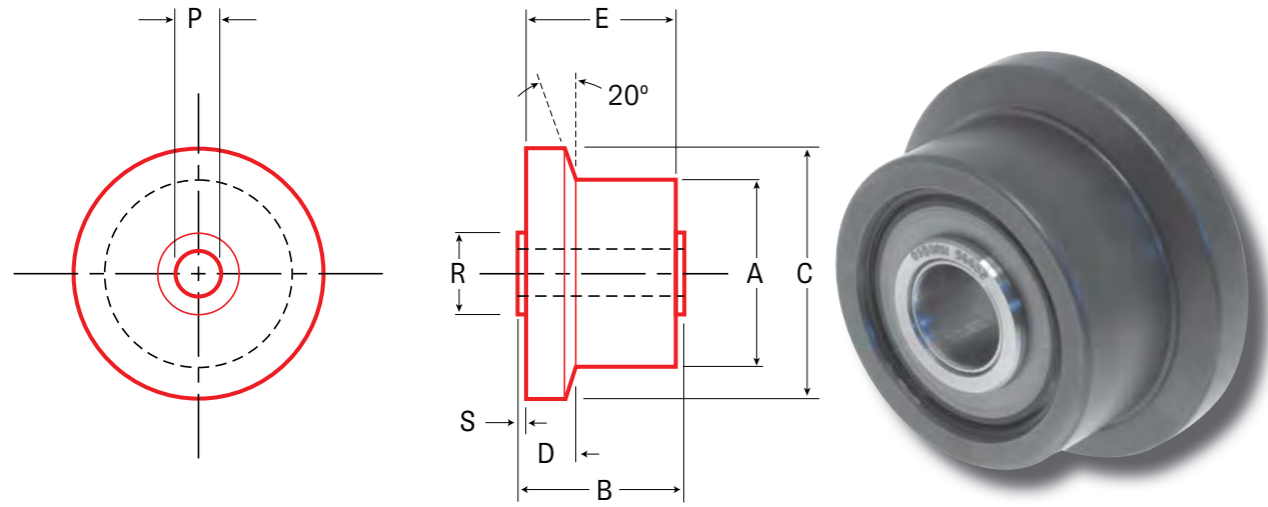
Part No.	Item No.	A			P		R	S	X	Ball or Tapered Roller Bearing	Bearing Capacity Radial Load (lbs)			Bearing Static Thrust Capacity (lbs)	Approx Weight (lbs)
		Roller Dia	Roller Width	Tread Width	Bore						3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Static Limit		
					Norm	Tol									
CLRY-1-1/2	90265	1.5	0.937	0.875	0.437	0.875	0.031	20	BB	710	1850	780	480	0.3	
CLRY-1-3/4	90266	1.750	1.063	1.000	0.500	1.000	0.031	20	BB	710	1850	780	480	0.7	
CLRY-2	90267	2.000	1.313	1.250	0.625	1.125	0.031	24	BB	1300	3400	1810	1120	0.9	
CLRY-2-1/4	90268	2.250	1.313	1.250	0.625	1.125	0.031	24	BB	1300	3400	1810	1120	1.4	
CLRY-2-1/2	90269	2.500	1.562	1.500	0.750	1.250	0.031	30	TRB	4570	10880	7630	4570	2.0	
CLRY-2-1/2-7	90270	2.500	1.562	1.500	0.750	1.250	0.031	30	BB	2130	5590	2530	1560	2.0	
CLRY-3	96307	3.000	1.812	1.750	1.000	1.750	0.031	30	TRB	6000	14270	^13030	12000	2.6	
CLRY-3-1/4	97204	3.250	1.812	1.750	1.000	1.750	0.031	30	TRB	6000	14270	^14120	12000	3.4	
CLRY-3-1/2	97568	3.500	2.062	2.000	1.125	2.000	0.031	30	TRB	7390	17590	^15200	13100	4.2	
CLRY-4	96312	4.000	2.312	2.250	1.250	2.250	0.031	30	TRB	7390	17590	^17730	13100	6.6	
CLRY-5	97569	5.000	2.875	2.750	1.750	3.250	0.062	48	TRB	13990	33290	^27450	^27450	11.3	
CLRY-6	96320	6.000	3.375	3.250	2.250	3.500	0.062	56	TRB	15060	35840	^35610	33100	19.4	
CLRY-7	97570	7.000	3.875	3.750	2.750	4.250	0.062	60	TRB	17830	42430	^43000	^43000	29.3	
CLRY-8	96327	8.000	4.500	4.250	3.255	4.750	0.125	40	TRB	35250	83890	^40110	^40110	43.9	
CLRY-9	97571	9.000	5.000	4.750	3.755	5.500	0.125	40	TRB	56400	134230	^45130	^45130	51.6	
CLRY-10	97572	10.000	5.500	5.250	4.255	6.500	0.125	40	TRB	58080	138240	^50140	^50140	80.0	

^Surface strength of roller OD

Other sizes available upon request  
 For HEAVY DUTY SHAFTS see pages 74-75  
 Refer to INSTALLATION NOTES on pages 87-89  
 LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
 1 kg = 9,81 N = 2,21 lbs

# LOAD RUNNERS

## Flanged Yoke Style - Inch Sizes



For metric sizes, please turn to page 41

Part No.	Item No.	A		B		C		D		E		P		R	S	Ball or Tapered Roller Bearing	Bearing Capacity Radial Load (lbs)			Bearing Static Thrust Capacity (lbs)	Approx Weight (lbs)
		Roller Dia	Roller Width	Flange Dia	Flange Thickness	Tread Width	Bore		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Static Limit										
							Nom	Tol													
FLRY-1-1/2	90258	1.500	0.937	2.188	0.218	0.872	0.437						0.875	0.031	BB	710	1850	780	480	0.4	
FLRY-1-3/4	90259	1.750	1.063	2.438	0.250	1.000	0.500						1.000	0.031	BB	710	1850	780	480	0.8	
FLRY-2	90260	2.000	1.313	2.688	0.312	1.250	0.625						1.125	0.031	BB	1300	3400	1810	1120	1.4	
FLRY-2-1/4	90261	2.250	1.313	2.938	0.312	1.250	0.625						1.125	0.031	BB	1300	3400	1810	1120	1.7	
FLRY-2-1/2	96652	2.500	1.562	3.187	0.500	1.500	0.750						1.250	0.031	TRB	4570	10880	7630	4570	2.4	
FLRY-2-1/2	90105	2.500	1.562	3.187	0.500	1.500	0.750						1.250	0.031	BB	2130	5590	2530	1560	2.4	
FLRY-2-3/4	90106	2.750	1.562	3.437	0.500	1.500	0.750						1.250	0.031	BB	2130	5590	2530	1560	2.9	
FLRY-3	96220	3.000	1.812	3.937	0.590	1.750	1.000						1.750	0.031	TRB	6000	14270	20000	12000	3.5	
FLRY-3-1/4	96225	3.250	1.812	4.187	0.590	1.750	1.000						1.750	0.031	TRB	6000	14270	20000	12000	4.3	
FLRY-3-1/2	96227	3.500	2.062	4.437	0.590	2.000	1.125						2.000	0.031	TRB	7390	17590	27200	13100	5.2	
FLRY-4	96229	4.000	2.312	4.937	0.590	2.250	1.250						2.250	0.031	TRB	7390	17590	27200	13100	7.7	
FLRY-5	96231	5.000	2.875	5.937	0.720	2.750	1.750						3.500	0.062	TRB	13990	33290	^50020	32500	12.9	
FLRY-6	96237	6.000	3.375	6.937	0.720	3.250	2.250						3.500	0.062	TRB	15060	35840	56400	33100	21.4	
FLRY-7	96241	7.000	3.875	7.937	0.720	3.750	2.750						4.250	0.062	TRB	17830	42430	79800	48400	31.7	
FLRY-8	96243	8.000	4.500	8.937	0.720	4.250	3.255						4.750	0.125	TRB	35250	83890	159800	110000	46.6	
FLRY-9	96246	9.000	5.000	9.937	0.720	4.750	3.755						5.500	0.125	TRB	56400	134230	^225560	147000	54.6	
FLRY-10	96250	10.000	5.500	10.937	0.720	5.250	4.255						6.500	0.125	TRB	58080	138240	276000	196000	83.4	

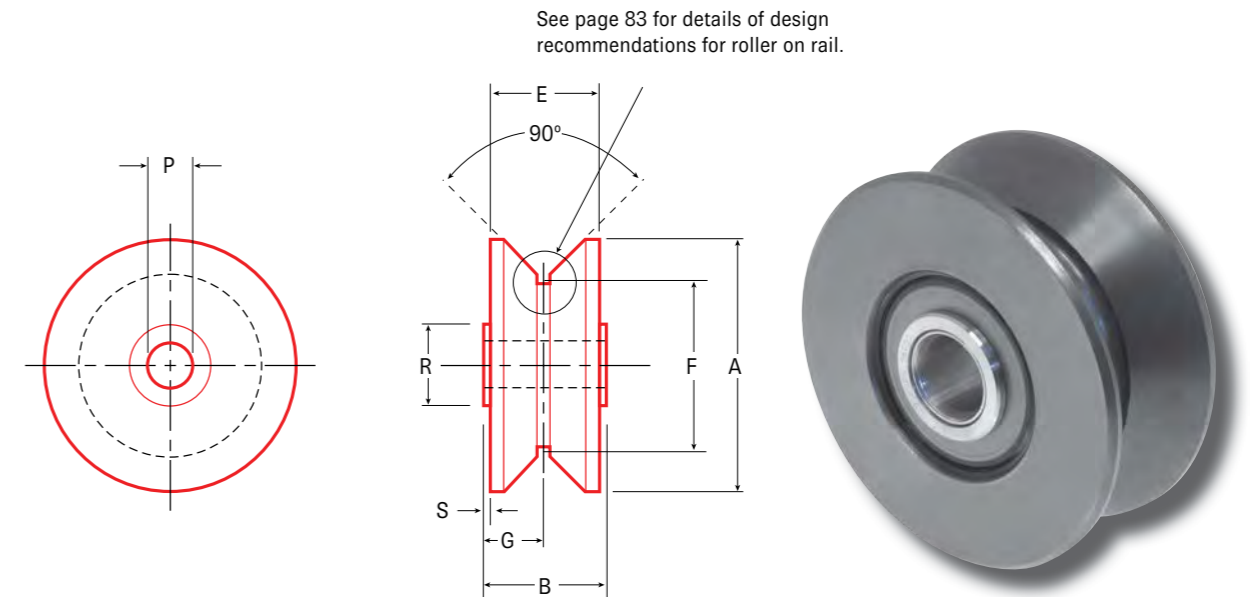
^Surface strength of roller OD

Other sizes available upon request  
 For HEAVY DUTY SHAFTS see pages 74-75  
 Refer to INSTALLATION NOTES on pages 87-89  
 LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
 1 kg = 9,81 N = 2,21 lbs



# LOAD RUNNERS

## V-Grooved Yoke Style - Inch Sizes



For metric sizes, please turn to page 42

Part No.	Item No.	A		B		E		F		G		P		R	S	Ball or Tapered Roller Bearing	Bearing Capacity Radial Load (lbs)			Bearing Static Thrust Capacity (lbs)	Approx Weight (lbs)
		Roller Dia	Roller Width	Tread Width	Point Dia	Groove Location	Bore		3000 hrs L10 life @ 100 RPM	500 hrs L10 life @ 33-1/3 RPM	Static Limit										
							Norm	Tol													
VLRY-2-1/2	90262	2.500	0.937	0.875	1.750	0.468	0.437						0.875	0.031	BB	710	1850	780	480	1.0	
VLRY-3	90263	3.000	1.312	1.250	2.062	0.656	0.625						1.125	0.031	BB	1300	3400	1810	1120	2.1	
VLRY-3-1/2-7	90109	3.500	1.562	1.500	2.250	0.781	0.750						1.250	0.031	BB	1560	4090	1810	1120	2.8	
VLRY-3-3/4	96655	3.750	1.562	1.500	2.500	0.785	0.750						1.250	0.031	TRB	4570	10880	7630	4570	3.1	
VLRY-4-1/2	96266	4.500	1.812	1.750	3.000	0.906	1.000						1.750	0.031	TRB	6000	14270	20000	12000	5.0	
VLRY-5	96279	5.000	2.062	2.000	3.500	1.030	1.125						2.000	0.031	TRB	7390	17590	27200	13100	7.6	
VLRY-5-1/2	96283	5.500	2.312	2.250	4.000	1.156	1.250						2.250	0.031	TRB	7390	17590	27200	13100	11.2	
VLRY-6-1/2	96287	6.500	2.875	2.750	5.000	1.437	1.750						3.500	0.062	TRB	15060	35840	^46030	^23010	18.8	
VLRY-7-1/2	96291	7.500	3.375	3.250	6.000	1.687	2.250						3.500	0.062	TRB	15060	35840	^53860	^26930	30.5	
VLRY-8-1/2	96292	8.500	3.875	3.750	7.000	1.937	2.750						4.250	0.062	TRB	17830	42430	^61710	^30850	44.7	
VLRY-9-1/2	96297	9.500	4.500	4.250	8.000	2.250	3.255						4.750	0.125	TRB	35250	^83890	^66540	^34770	64.2	
VLRY-10-1/2	96300	10.500	5.000	4.750	9.000	2.500	3.755						5.500	0.125	TRB	56400	^134230	^77380	^38690	77.5	
VLRY-11-1/2	96302	11.500	5.500	5.250	10.000	2.750	4.255						6.500	0.125	TRB	58080	^138240	^85220	^42610	112.2	

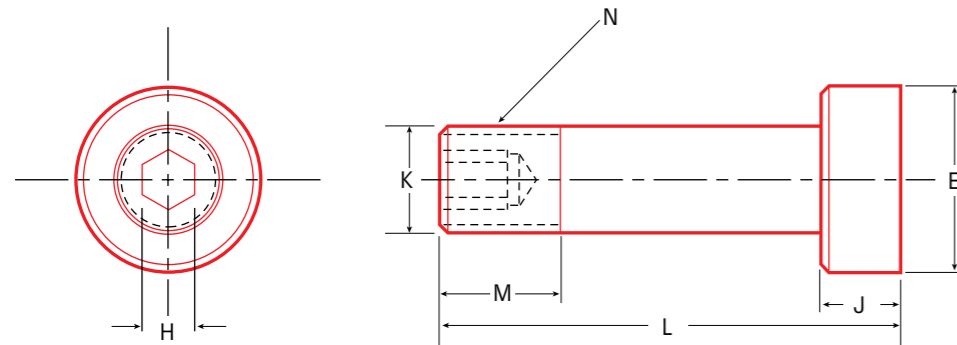
^Surface strength of roller OD

\*Exceeds surface strength of roller OD

Other sizes available upon request  
 For HEAVY DUTY SHAFTS see pages 74-75  
 Refer to INSTALLATION NOTES on pages 87-89  
 LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
 1 kg = 9,81 N = 2,21 lbs



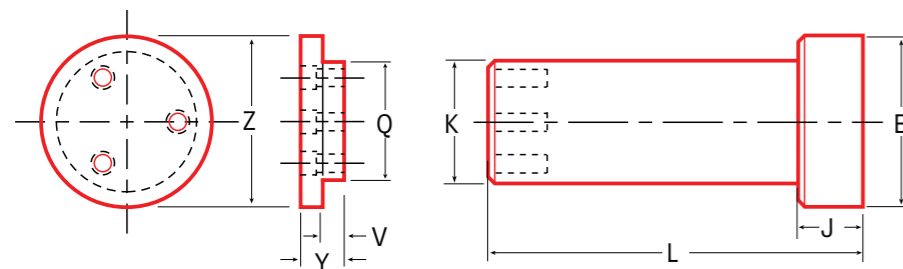
Shaft Style A includes jam nut and lock washer



For metric sizes, please turn to page 43

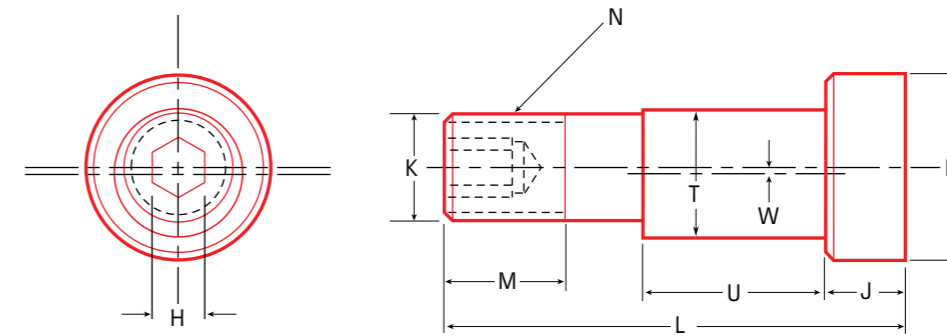
Part No.	Item No.	Fits PLY & CLRY	Fits FLRY	Fits VLRV	E	H	J	K	L	M	N	Approx Weight (lbs)
					Head Dia	Hex Size	Head Length	Shaft Dia	Shaft Length	Thread Length	Thread	
					-0.0002 -0.0012			-0.0002 -0.0012				
SHA-437	90282	1-1/2	1-1/2	2-1/2	0.750	0.157	0.375	0.4375	2.062	0.625	7/16"-20	0.7
SHA-500	90283	1-3/4	1-3/4	-	0.875	0.250	0.437	0.500	2.375	0.750	1/2"-20	0.8
SHA-625	90284	2 & 2-1/4	2 & 2-1/4	3	1.125	0.312	0.500	0.625	3.000	0.875	5/8"-18	1.0
SHA-750	95006	2-1/2	2-1/2	3-1/2-7 +3-3/4	1.250	0.312	0.625	0.750	3.687	1.000	3/4"-16	1.2
SHA-1000	95008	3 & 3-1/4	3 & 3-1/4	4-1/2	1.750	0.500	0.750	1.000	4.312	1.125	1"-14	1.5
SHA-1125	95020	3-1/2	3-1/2	5	2.000	0.500	0.875	1.125	4.875	1.187	1-1/8"-12	2.1
SHA-1250	95023	4	4	5-1/2	2.250	0.500	0.875	1.250	5.250	1.312	1-1/4"-12	2.7
SHA-1750	95028	5	5	6-1/2	3.500	0.500	1.250	1.750	7.000	1.875	1-3/4"-12	8.3
SHA-2250	95036	6	6	7-1/2	3.500	0.625	1.250	2.250	7.750	2.125	2-1/4"-12	12.6
SHA-2750	95042	7	7	8-1/2	4.250	0.625	1.375	2.750	9.000	2.625	2-3/4"-12	22.3

Shaft Style B includes shaft retainers, socket head cap screws and lock washers



Part No.	Item No.	Fits FLRY	Fits PLY	Fits VLRV	E	J	K	L	Q	V	Y	Z	Approx Weight (lbs)
					Head Dia	Head Length	Shaft Dia	Shaft Length	Retainer Mount Dia	Retainer Mount Length	Retainer Length	Retainer Dia	
					-0.0002 -0.0012		-0.0002 -0.0012						
SHB-3250	95045	8	8	9-1/2	4.750	1.875	3.254	7.625	3.250	0.500	1.000	4.000	25.3
SHB-3750	95049	9	9	10-1/2	5.500	2.125	3.754	8.625	3.750	0.500	1.125	4.500	38.3
SHB-4250	95050	10	10	11-1/2	6.500	2.250	4.254	9.375	4.250	0.500	1.125	5.000	54.6

Shaft Style E includes flat washer, jam nut and lock washer



Part No.	Item No.	Fits PLY & CLRY	Fits FLRY	Fits VLRV	E	H	J	K	L	M	N	T	U	W	Approx Weight (lbs)
					Head Dia	Hex Size	Head Length	Shaft Dia	Shaft Length	Thread Length	Thread	Eccentric Dia	Eccentric Length	Eccentricity	
					-0.0002 -0.0012			-0.0002 -0.0012				+0.001 -0.001	+0.000 -0.010		
SHE-437	90285	1-1/2	1-1/2	2-1/2	0.750	0.156	0.375	0.313	2.062	3/8	5/16-18	0.438	0.843	0.030	0.700
SHE-500	90286	1-3/4	1-3/4	-	0.875	0.156	0.437	0.375	2.375	9/16	3/8-24	0.500	0.968	0.030	1.000
SHE-625	90287	2 & 2-1/4	2 & 2-1/4	3	1.125	0.250	0.500	0.500	3.000	9/16	1/2-20	0.625	1.187	0.030	1.200
SHE-750	97507	2-1/2	2-1/2	3-1/2-7 +3-3/4	1.250	0.312	0.625	0.625	3.687	1	5/8-18	0.750	1.495	0.030	1.500
SHE-1000	95056	3 & 3-1/4	3 & 3-1/4	4-1/2	1.750	0.312	0.750	0.875	4.312	1-1/8	7/8-14	1.000	1.745	0.030	1.350
SHE-1125	95058	3-1/2	3-1/2	5	2.000	0.500	0.875	1.000	4.875	1-3/16	1-14	1.125	1.995	0.030	2.000
SHE-1250	95059	4	4	5-1/2	2.250	0.500	0.875	1.000	5.250	1-5/16	1-14	1.250	2.245	0.060	2.250
SHE-1750	96848	5	5	6-1/2	3.500	0.500	1.250	1.500	7.000	1-7/8	1-1/2-12	1.750	2.807	0.060	2.812
SHE-2250	97508	6	6	7-1/2	3.500	0.625	1.250	2.000	7.750	2-1/8	2-12	2.250	3.307	0.060	3.312
SHE-2750	97509	7	7	8-1/2	4.250	0.625	1.375	2.500	9.000	2-5/8	2-1/2-12	2.750	3.807	0.060	3.812

# LOAD RUNNERS CAM RUNNERS

## Needle Bearing Alternative



Osborn Cam Runners are significantly different from conventional needle bearing style cam followers.

### General Characteristics:

Cam Runners are manufactured with a composite synthetic tread and stainless steel stud. The composite tread consists of two different synthetic materials chosen to provide optimal characteristics for the outer wear surface and the inner bearing surface. The two synthetic parts are molded together to form a single mechanically bonded assembly that is mounted on the stud, eliminating the need for conventional seals and lubricants. The outer tread material offers high mechanical strength while the inner bearing material provides high lubricity.

The stud provides optimum life and corrosion resistance. Tread bearing wear is critically dependent on the hardness of the mating surface. When this assembly is used as a direct replacement for a conventional cam follower, the life will be optimized if the cam or other mating surface is within the range of 55 - 60 Rc. Softer or harder materials may result in decreased life, particularly under high loads. The mating surface must be free of grease, oil and abrasive contaminants.

This assembly is dimensionally interchangeable with conventional steel cam followers. Because of its unique construction, comparable load ratings are not applicable. In order to guide you in choosing applications, extensive testing has been utilized to develop life expectancies based upon continuous duty testing at various speeds and loads. In continuous duty operation under identical loads and speeds, the Cam Runner has been found to outlast conventional steel cam followers by an average of 10 times!

Bearing to stud clearance is greater than for needle bearing designs and will increase during early use and will stabilize after "wearing in"

#### Advantages:

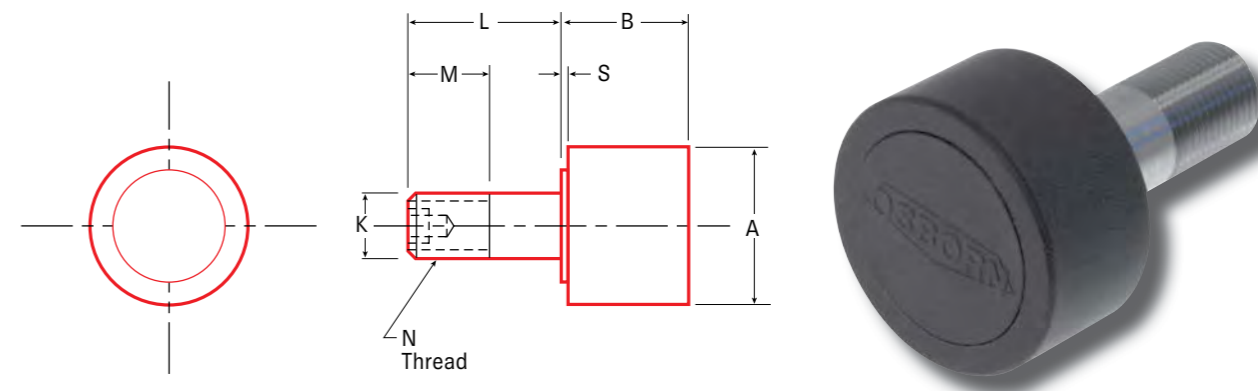
- No lubrication required – ever!
- Non sparking and low electrical conductivity
- Thrust load tolerant
- Extended life, ideal for difficult-to-service-operations
- No lubricant leakage to contaminate your process
- Quiet operation resulting from no internal moving parts
- Wide range of operating temperatures
- ISO 9001 compliant

Not recommended for ambient temperatures above 250° F (121°C) , highly abrasive applications or repeated heavy shock loads.



# LOAD RUNNERS CAM RUNNERS

## Plain - Concentric Stud Style - Inch Sizes



Part No.	Item No.	A	B	K	L	M	N	S	Radial Capacity Static Limit (lbs)	Approx Weight (lbs)
		Roller Dia	Roller Width	Stud Dia	Stud Length	Thread Length	Thread	Shoulder Length		
PCR-1/2	96959	0.500	0.406	0.188	0.625	0.250	10-32	0.031	110	0.05
PCR-9/16	96960	0.563	0.406	0.188	0.625	0.250	10-32	0.031	110	0.05
PCR-5/8	96961	0.625	0.469	0.250	0.750	0.313	1/4-28	0.031	230	0.05
PCR-11/16	96962	0.688	0.469	0.250	0.750	0.313	1/4-28	0.031	230	0.05
PCR-3/4	96963	0.750	0.563	0.375	0.875	0.375	3/8-24	0.063	700	0.10
PCR-7/8	96964	0.875	0.563	0.375	0.875	0.375	3/8-24	0.063	700	0.10
PCR-1	96965	1.000	0.688	0.438	1.000	0.500	7/16-20	0.063	870	0.10
PCR-1-1/8	96966	1.125	0.688	0.438	1.000	0.500	7/16-20	0.063	870	0.10
PCR-1-1/4	96967	1.250	0.813	0.500	1.250	0.625	1/2-20	0.063	1100	0.20
PCR-1-3/8	96968	1.375	0.813	0.500	1.250	0.625	1/2-20	0.063	1100	0.20
PCR-1-1/2	96969	1.500	0.938	0.625	1.500	0.750	5/8-18	0.063	1800	0.40
PCR-1-5/8	96970	1.625	0.938	0.625	1.500	0.750	5/8-18	0.063	1800	0.40

Cam Runners provided with hex jam nut and lock washer.  
LOAD CAPACITIES ARE BASED ON UNIFORM AND STEADY LOADING.  
1 kg = 9,81 N = 2,21 lbs





# LOAD RUNNERS

## Load Rails - Metric Sizes (mm)



Osborn Load Rails® are made of high-strength steel and machined to tight tolerances, then cut to length and drilled to customer specifications. Osborn Load Rails® offer allowable rail loadings of up to 317450 N (71500 lbs) per roller. If not specified otherwise they are hardened on the rolling surface and available in two separate hardness ranges, find details below.

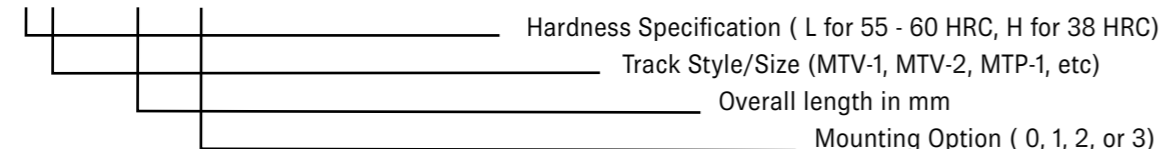
**Other configurations and dimensions, steel grades, stainless steel types or specials according customer drawings are available on request. Please contact Osborn for further information.**

To specify Osborn Load Rails, choose the hardness option (letter "L" for 55-60 HRC; letter "H" for 38 HRC), choose the style and size (MTV-1, MTV-2, MTP-1, etc), add the overall length in millimetres - XXXX below -, and add the hole mounting option after a dash. For length less than 1.000 mm use a leading zero.

(L/H)-(M/TV/TP/PV)-(1/2)-XXXX-(0/1/2/3)

Example: For rail in carbon steel 55-60 HRC, 1.500 mm length of V track, 75 mm high (MTV-1) and with hole mounting option # 1, the part number would read

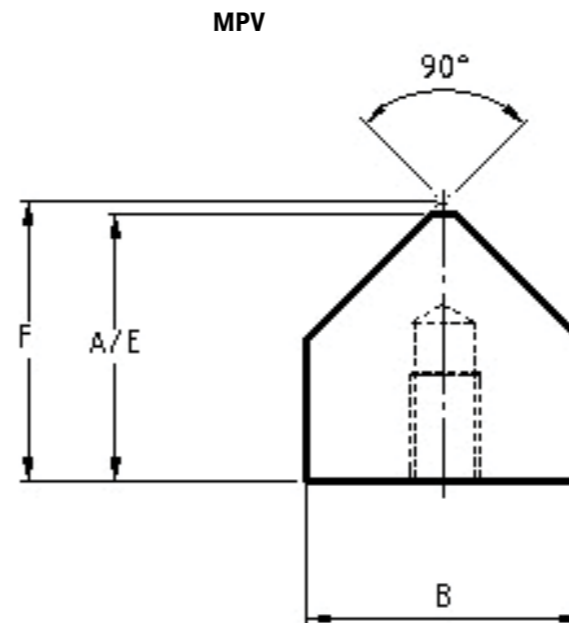
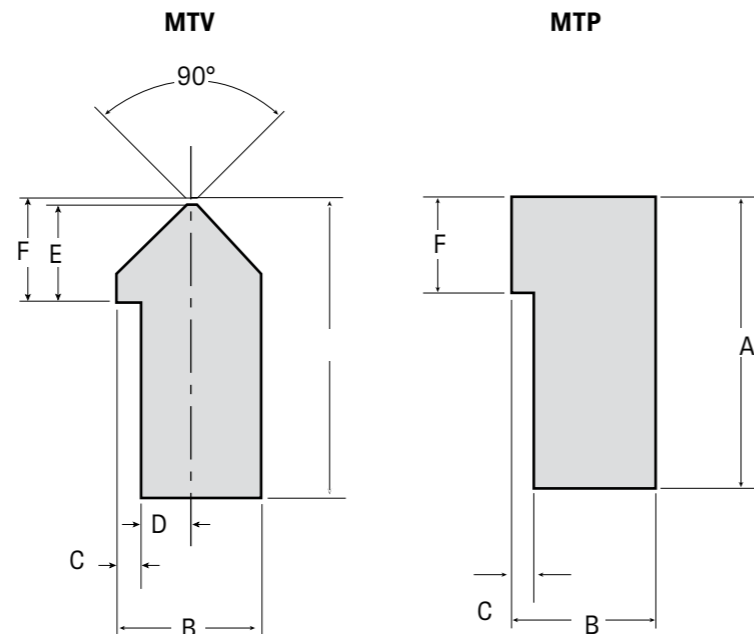
L MTV-1 1500 1



Osborn Part No.	A	B	C	D	E	F	G	Mounting		
								Option #1	Option #2	Option #3
L/H-MTV-1 XXXX	75	40	6	14	27	25,8	20	11 Cap Screw	10 Soc.Hd.Cap Screw	10x1.5 Cap Screw
L/H-MTV-2 XXXX	100	50	6	19	39	37,2	25	13 Cap Screw	12 Soc.Hd.Cap Screw	12x1.75 Cap Screw
L/H-MTP-1 XXXX	75	40	6	-	27	-	20	11 Cap Screw	10 Soc.Hd.Cap Screw	10x1.5 Cap Screw
L/H-MTP-2 XXXX	100	50	6	-	39	-	25	13 Cap Screw	12 Soc.Hd.Cap Screw	12x1.75 Cap Screw
L/H-MPV-1 XXXX	38,2	40	-	-	-	40	-	M10 x 1,5 x L.15 Cap Screw		
L/H-MPV-2 XXXX	48,2	50	-	-	-	50	-	M12 x 1,75 x L.20 Cap Screw		

Rails longer than 3000 mm are delivered in length (cut at 90° angle).

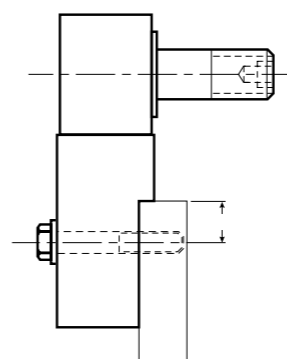
Mounting: Holes are equally spaced 250 mm apart except for track length over 500 mm, which has 3 holes, equally spaced 150 mm apart. For track length less than 500 mm, holes are spaced 100 mm apart. All holes are spaced evenly from end. Customer specified hole patterns are possible. Please contact Osborn with your requirements.



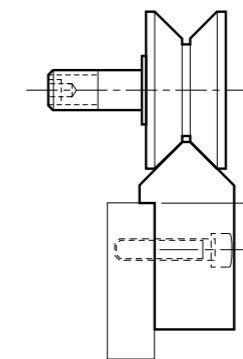
**Osborn Load Rails**  
are made of  
high-quality steel



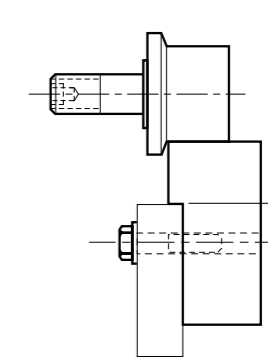
**Mounting Option #1**  
Clearance hole for cap screw



**Mounting Option #2**  
Clearance hole and counterbore for socket head cap screw and hi-collar lock washer.

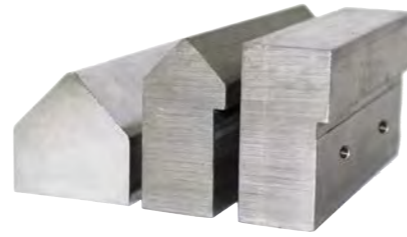


**Mounting Option #3**  
Tapped thru hole for cap screw



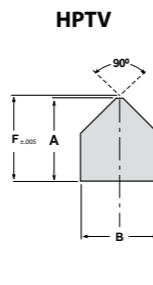
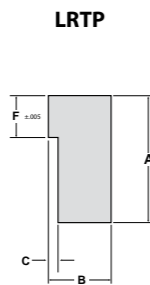
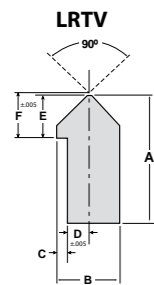


# Maximum DESIGN FLEXIBILITY



Osborn Load Rails® are made of high-strength steel and machined to tight tolerances, then cut to length and drilled to customer specifications. Osborn Load Rails offer allowable rail loadings up to 71,500 lbs (317450 N) per roller.

## Load Rail Profiles

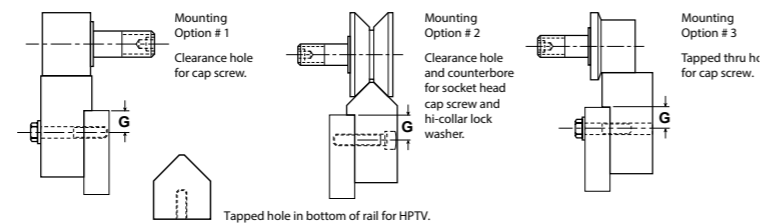


To determine a part number of the requested Inch Size Load Rail, specify the profile, replace "XXXX" with the track length dimension, and add the appropriate mounting option code (see chart). For example: to specify a 4" high V-track 28-1/2" long with a clearance hole for a cap screw, the part number is LRTV-20284-1.

XXX	X
Track length in whole inches	Fractional track length
001 = 1"	0 = 0
002 = 2"	1 = 1/8"
003 = 3"	2 = 1/4"
004 = 4"	3 = 3/8"
005 = 5"	4 = 1/2"
006 = 6"	5 = 5/8"
etc.	6 = 3/4"
	7 = 7/8"

## Mounting Options

Mounting holes equally spaced from rail ends on each option.

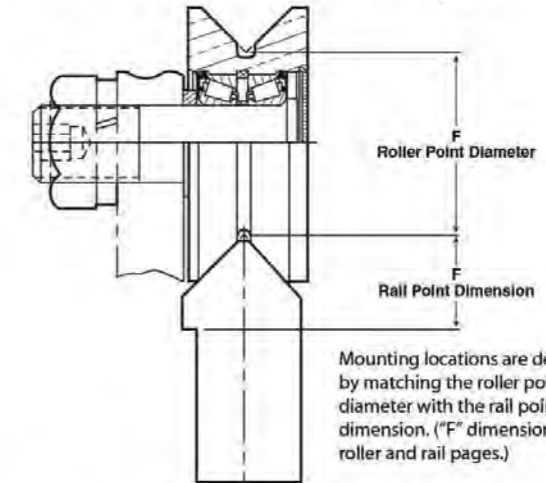
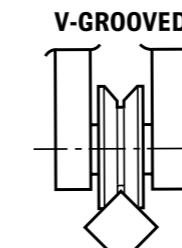
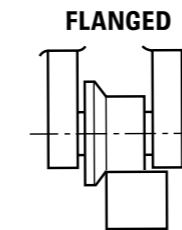
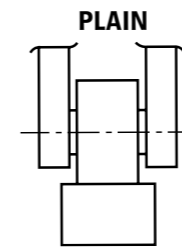


Part No	Measurement in Inches								Mounting		
	Lgth	A	B	C	D	E	F	G	Option 1	Option 2	Option 3
LRTV-4 XXXX	72"	2.0	1.0	0.125	0.375	0.75	0.780	0.500	1/4 Cap Screw	1/4 Soc. Hd. Cap Screw	1/4-20 UNC Cap Screw
LRTV-1 XXXX	144"	3.0	1.5	0.250	0.500	1.00	1.047	0.750	3/8 Cap Screw	3/8 Soc. Hd. Cap Screw	3/8-16 UNC Cap Screw
LRTV-2 XXXX	144"	4.0	2.0	0.250	0.750	1.50	1.562	1.000	1/2 Cap Screw	1/2 Soc. Hd. Cap Screw	1/2-13 UNC Cap Screw
L RTP-4 XXXX	72"	2.0	1.0	0.125	-	-	0.780	0.500	1/4 Cap Screw	1/4 Soc. Hd. Cap Screw	1/4-20 UNC Cap Screw
L RTP-1 XXXX	144"	3.0	1.5	0.250	-	-	1.047	0.750	3/8 Cap Screw	3/8 Soc. Hd. Cap Screw	3/8-16 UNC Cap Screw
L RTP-2 XXXX	144"	4.0	2.0	0.250	-	-	1.562	1.000	1/2 Cap Screw	1/2 Soc. Hd. Cap Screw	1/2-13 UNC Cap Screw
HPTV-4 XXXX	72"	1.0	1.0	-	-	-	1.030	-	-	-	1/4-20 UNC Cap Screw
HPTV-1 XXXX	144"	1.5	1.5	-	-	-	1.547	-	-	-	3/8-16 UNC Cap Screw
HPTV-2 XXXX	144"	2.0	2.0	-	-	-	2.062	-	-	-	1/2-13 UNC Cap Screw

## Track Alignment

Whether using our rail or yours, the track and roller should be aligned so that the roller tread lies flat on the track surface.

Osborn Load Runners® on Load Rail® Design Recommendations



Mounting locations are determined by matching the roller point diameter with the rail point dimension. ("F" dimensions on roller and rail pages.)

\*\*Note: Other configurations and dimensions available.

## Track Capacity

For steel track of 180,000 PSI tensile strength (Rc=40), refer to the track capacity chart to find the track load capacity for the style and size of roller to be used. For steel track other than 180,000 PSI tensile strength, first refer to the track capacity factor chart for the type of steel to be used. Then multiply the track capacity for the roller being used by the track capacity factor for the steel to be used.

TRACK CAPACITY*								TRACK CAPACITY FACTOR		
HPC + HPCA PLR + PLRY		HPJ + HPJA FLR + FLRY		HPV + HPVA VLR + VLRY		Track Hardness Rc	Tensile Strength	Capacity Factor		
Roller Size	Capacity	Roller Size	Capacity	Roller Size	Capacity					
3	14,760 LBS. 65,680 N	3	10,500 LBS. 44,720 N	3 1/2	8,100 LBS. 36,000 N	26	120,000 PSI 8,437 Kg/Cm2	0.369		
3 1/4	16,000 LBS. 71,200 N	3 1/4	10,900 LBS. 48,500 N	4 1/2	13,200 LBS. 58,800 N	32	140,000 PSI 9,843 Kg/Cm2	0.552		
3 1/2	17,225 LBS. 76,650 N	3 1/2	14,200 LBS. 63,190 N	5	15,000 LBS. 66,600 N	36	160,000 PSI 11,249 Kg/Cm2	0.755		
4	25,300 LBS. 112,580 N	4	19,000 LBS. 84,550 N	5 1/2	16,700 LBS. 74,400 N	40	180,000 PSI 12,655 Kg/Cm2	1.000		
5	38,650 LBS. 172,000 N	5	29,400 LBS. 130,830 N	6 1/2	20,200 LBS. 90,100 N	44	200,000 PSI 14,061 Kg/Cm2	1.235		
6	54,830 LBS. 244,000 N	6	47,730 LBS. 212,400 N	7 1/2	23,800 LBS. 106,000 N	47	220,000 PSI 15,467 Kg/Cm2	1.494		
7	73,810 LBS. 328,450 N	7	60,860 LBS. 270,830 N	8 1/2	27,300 LBS. 121,000 N	50	240,000 PSI 16,874 Kg/Cm2	1.777		
8	95,600 LBS. 425,400 N	8	82,220 LBS. 365,880 N	9 1/2	30,800 LBS. 137,000 N	53	260,000 PSI 18,280 Kg/Cm2	1.995		
9	120,200 LBS. 534,900 N	9	105,160 LBS. 467,960 N	10 1/2	34,300 LBS. 153,000 N	56	280,000 PSI 19,686 Kg/Cm2	2.209		
10	147,600 LBS. 656,800 N	10	130,900 LBS. 582,500 N	11 1/2	37,900 LBS. 168,000 N	58	300,000 PSI 21,092 Kg/Cm2	2.306		

\* Radial load only for tracks made of 180,000 PSI steel (Hardness Rc = 40)





# Load Runners PART NUMBERING

Part Number	Description
PLR	Plain Load Runners (Inch)
FLR	Flanged Load Runners (Inch)
VLR	V-Grooved Load Runners (Inch)
CLRY	Crowned Load Runners Yoke (Inch)
SHA/SHB	Heavy-Duty concentric Shaft (Inch)
SHE	Heavy-Duty Eccentric Shaft (Inch)
PCR	Plain Cam Runners (Inch)
<b>HPC</b>	<b>Metric Plain Stud</b>
<b>HPJ</b>	<b>Metric Flanged Stud</b>
<b>HPV</b>	<b>Metric V-Groove Stud</b>
<b>HPCA</b>	<b>Metric Plain Yoke</b>
<b>HPJA</b>	<b>Metric Flanged Yoke</b>
<b>HPVA</b>	<b>Metric V-Grooved Yoke</b>
<b>MSHA</b>	<b>Metric Heavy-Duty concentric Shaft</b>

Extensions	Description
PLR(E)	Eccentric Stud
FLR(C)	Crown Tread
(F)FLR	Double Flange
VLR(S)	Stainless Steel
PLR (H)	High Temp
PLR(N)	Nylon
PLR (U)	Urethane
FLR(Y)	Yoke
(H)PJ	Metric



## Roll With The Best. Buy All Of Your Rail And Idler-Rollers From Osborn.

Contact us today and find out how Load Runners rail and idler rollers will remedy your unique material handling challenges. Our web site features in-depth information, **CAD-drawings download**, full catalog, installation instructions, and more.

Let the Osborn team help you determine the best solution for your needs.

# Load Runners INSTALLATION NOTES

## Tightening Torque

STUD DIAMETER	DRY THREADS	LUBRICATED THREADS
Less than 5/8" / 16mm	15 ft. lb. / 20 Nm	8 ft lb. / 10 Nm
5/8"/16 mm to 1"/24 mm	50 ft. lb. / 68 Nm	25 ft. lb. / 34 Nm
Over 1" / 24 mm	100 ft. lb. / 136 Nm	50 ft. lb. / 68 Nm

## Osborn Load Runners Recommended Installation Procedure:

**WARNING:** High voltage and rotating parts may cause serious or fatal injury. Be sure to turn off power to machinery. Read and follow all instructions. Be sure to properly apply pressure when press-fitting your Load Runners. Hammering directly on the bearing could result in bearing damage or personal injury.

While lack of lubrication causes shorter operating life and product damage, Load Runners are designed and lubricated for life. In some instances, there is a convention to re-lubricate your Load Runners. Use the torque chart to install nuts properly. Do NOT over- or under-torque nuts.

## Stud-Style Installation Considerations

- Inspect the housing
  - Remove all burrs/sharp edges and clean.
  - Confirm housing bore diameter, insuring a snug fit with stud.
- Install stud into housing
  - Do NOT hammer Load Runners at any time.
- Install lock washer and jam nut
  - Do not tighten jam nut beyond torque specifications or damage may occur.
  - Use hexagonal hole (broach) with hex key to prevent the stud from rotating when the nut is tightened.

## Blind Hole Mounting

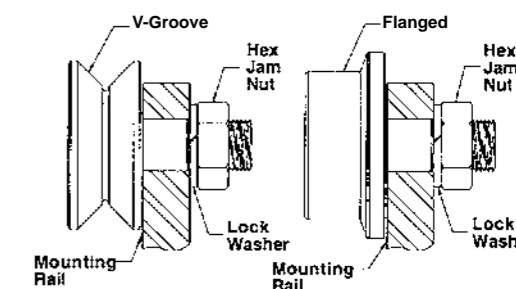
Certain applications require blind hole mounting into tapped threads. Use the hex key to ensure adequate torque is applied.

## Mounting Considerations

Mounting holes should be machined to the nominal stud size within  $\pm .001/- .000$  ( $\pm .025$  mm/ $- .000$  mm) tolerance.

When properly aligned, the roller stud should slip into the mounting member. Do not force the stud into the mounting member as damage to the roller may occur.

When mounting rollers, do not torque the jam nuts beyond what is recommended or damage may occur. Be sure that the mounting member is of sufficient thickness to support the applied loads.





**Yoke-Style Installation Considerations**

Load Runners yoke-style idler-rollers offer considerable mounting flexibility. They can be installed on a bolt or thru-shaft between yoke brackets ("ears") which are fabricated as an integral part of the equipment, or in individual yoke brackets which can be bolted into position wherever needed.

It is important that the members which support the mounting bolt or thru-shaft are rigid enough to resist bending (which could cause uneven loading on the rollers) and strong enough to withstand the operational radial and thrust loads.

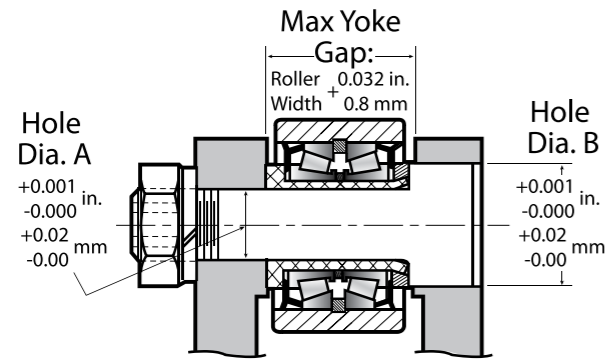
Osborn offers an exclusive line of heavy-duty thru-shafts designed specifically for use with yoke-style Load Runners idler-rollers. See pages 43, and 74-75.

**Axial clamping of yoke-style rollers (through the bore) is required to prevent the bearing components from separating, causing loss of bearing adjustment and premature failure.** The outboard end of the mounting bolt or thru-shaft should be allowed to float in the yoke ear to avoid "pinching" and restricting the idler-roller tread when the roller is clamped. (See drawings below).

**Shaft Style A**

See pages 43 & 74 for actual shaft dimensions.

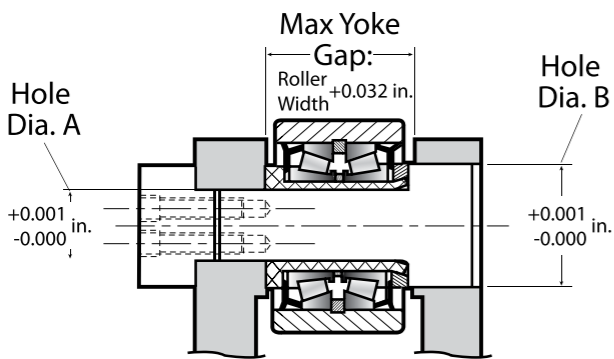
For Roller Sizes: PLRY + FLRY 1 1/2" Thru 7",  
VLRV 2 1/2" Thru 8 1/2"  
and all metrics



**Shaft Style B**

See page 43 for actual shaft dimensions.

For Roller Sizes: PLRY + FLRY 8" Thru 10",  
VLRV 9 1/2" Thru 11 1/2"

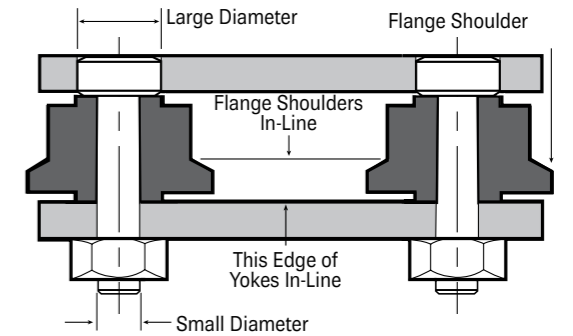


**Flange Alignment**

The shoulder on the flange end of a flanged yoke-style idler-roller serves as the dimensional reference point for accurate positioning of the roller flange with respect to the supported structure.

Orient each roller so that the flange is closest to the fixed (small diameter) end of the bolt or thru-shaft. (See Drawing.) When the bolt or thru-shaft is clamped, the reference shoulder will be pulled up tightly against the structure reference surface.

By mounting a string of flanged yoke-style rollers in this manner, all flanges will be properly aligned.



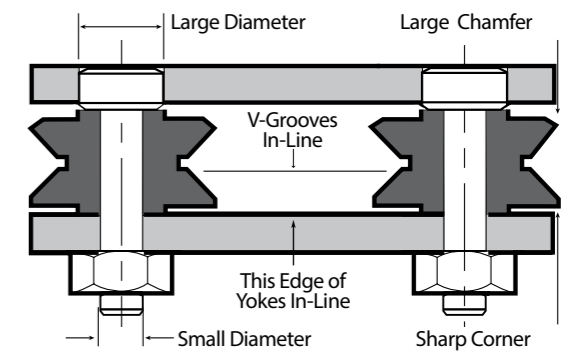
**V-Grooved Alignment**

The Chamfer Side (**Metric** rollers) resp. the sharp-radius corner (**Inch** rollers) indicate which shoulder should be used as a dimensional reference point for accurate alignment of a V-Grooved roller with respect to the supported structure.

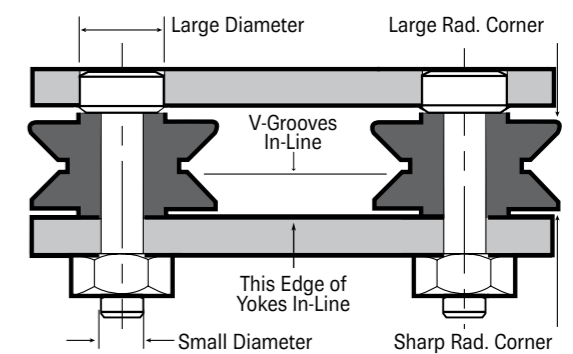
Orient each roller so that the Chamfer Side (**Metric**) resp. sharp-radius corner (**Inch**) is closest to the fixed (small diameter) end of the bolt or thru-shaft. (See Drawing.) When the bolt or thru-shaft is clamped, the reference shoulder will be pulled up tightly against the structure reference surface.

By mounting a string of V-Grooved yoke-style rollers in this manner, all V-Grooves will be properly aligned.

**Reference for Metric V-Groove-Yoke**

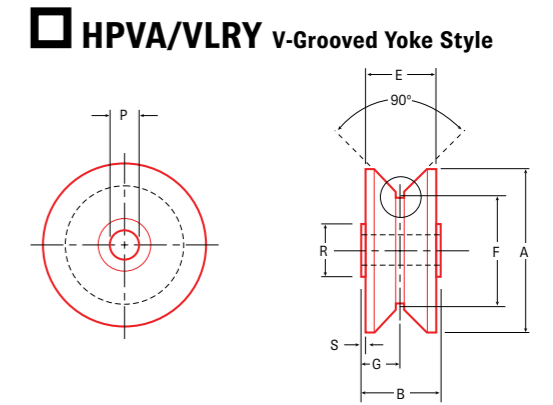
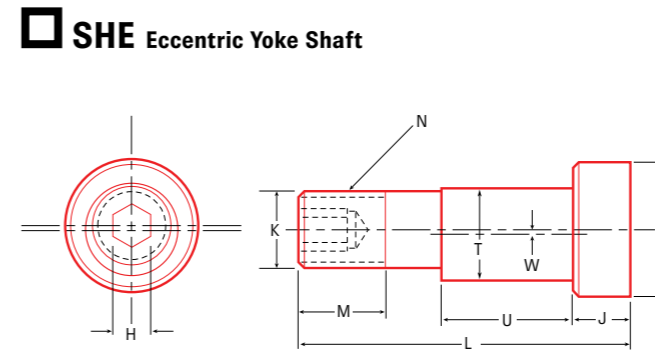
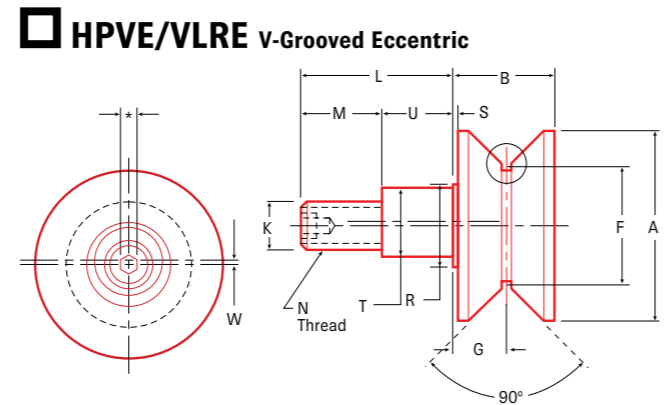
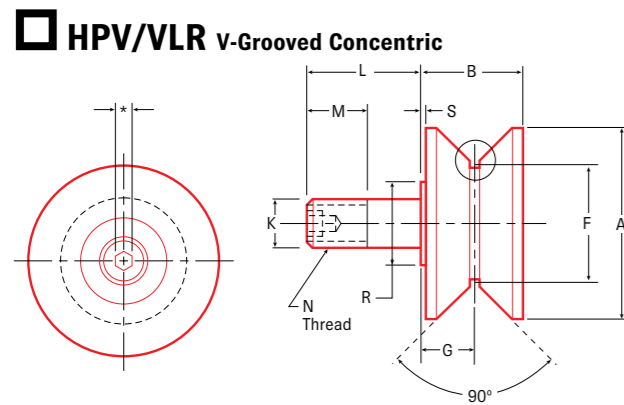
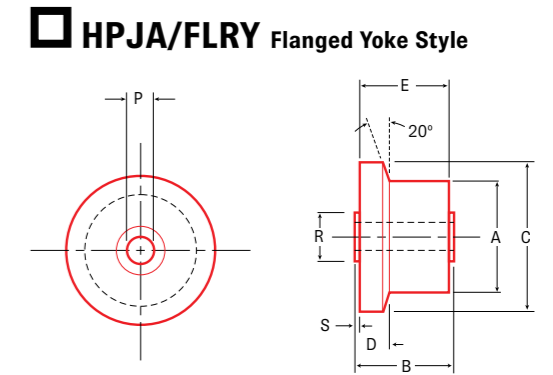
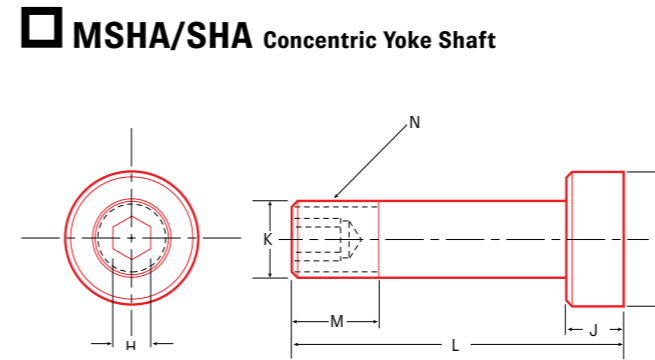
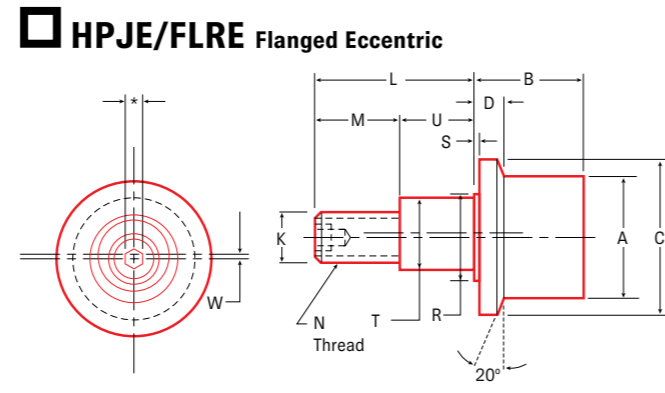
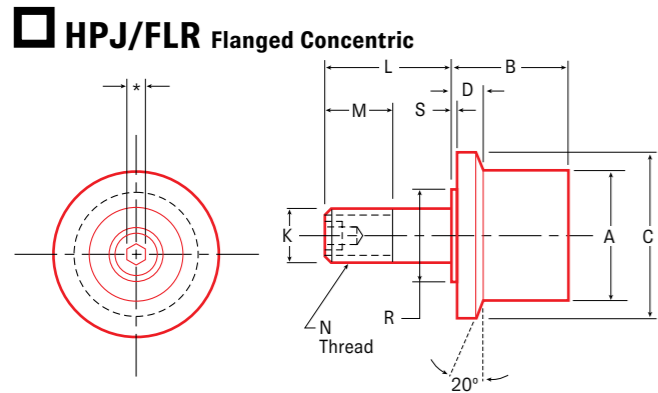
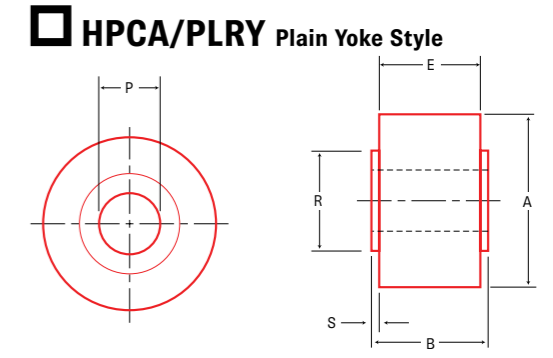
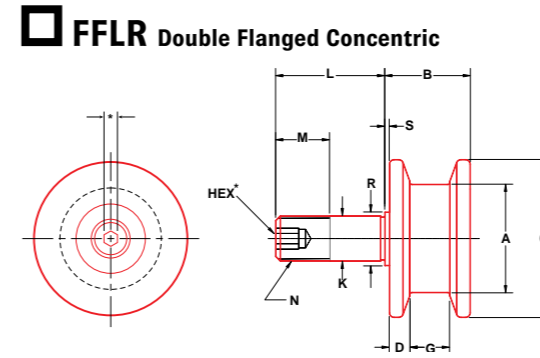
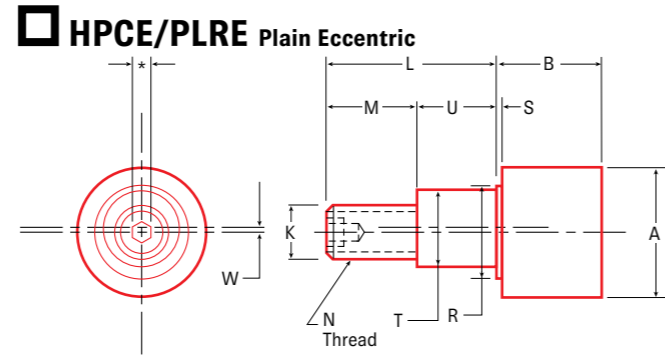
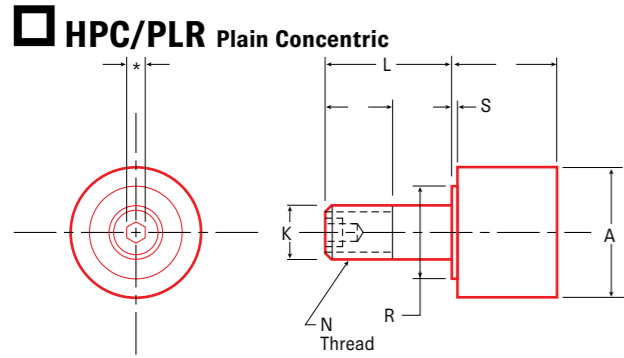


**Reference for Inch V-Groove-Yoke**



**Hex Socket Sizes**

Inch		Metric	
Stud Diameter	Hex Socket Size	Stud Diameter	Hex Socket Size
≤ 1/2"	3/16"	≤ 12 mm	4 mm
5/8" – 7/8"	5/16"	14 mm	6 mm
1" – 1 1/4"	1/2"	16 - 30 mm	8 mm
≥ 2"	5/8"	≥ 30 mm	12 mm



Idle rollers are not recommended for repetitive and/or impact loads. Shock and impact loads will reduce the life of the roller.

Name: _____	Operating Temperature: _____	A Roller Dia.
Company: _____	Loads: _____	B Roller Width
Address: _____	Speeds: _____	C Flange Dia.
Phone: _____	Desired L-10 Life: _____	D Flange Width
Application: _____	Lubrication:	F Point Dia.
	[ ] Sealed [ ] Manual	G Groove Loc.
	Material:	K Stud Dia.
	[ ] Steel [ ] Stainless [ ] Other _____	L Stud Length
	Critical Dimensions: _____	M Thread Len.
		N Thread
		R Shoulder Dia.
		S Shoulder Len.
		T Eccent. Dia.
		U Eccent. Len.
		W Eccentricity

**Send to contact details on page 2**

Name: _____	Operating Temperature: _____	A Roller Dia.
Company: _____	Loads: _____	B Roller Width
Address: _____	Speeds: _____	C Flange Dia.
Phone: _____	Desired L-10 Life: _____	D Flange Width
Application: _____	Lubrication:	F Point Dia.
	[ ] Sealed [ ] Manual	G Groove Loc.
	Material:	K Stud Dia.
	[ ] Steel [ ] Stainless [ ] Other _____	L Stud Length
	Critical Dimensions: _____	M Thread Len.
		N Thread
		R Shoulder Dia.
		S Shoulder Len.
		T Eccent. Dia.
		U Eccent. Len.
		W Eccentricity

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