

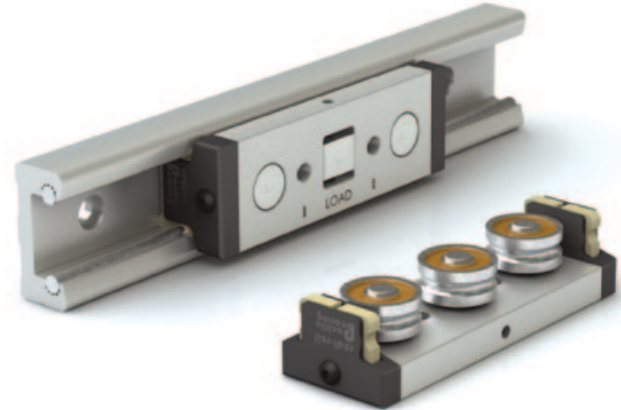
redi-rail[®]

LINEAR GUIDES



FEATURES & BENEFITS

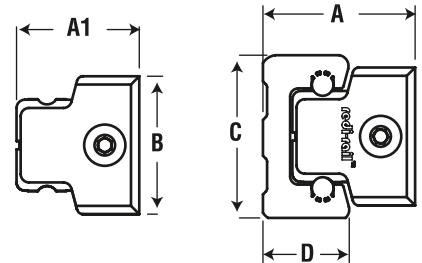
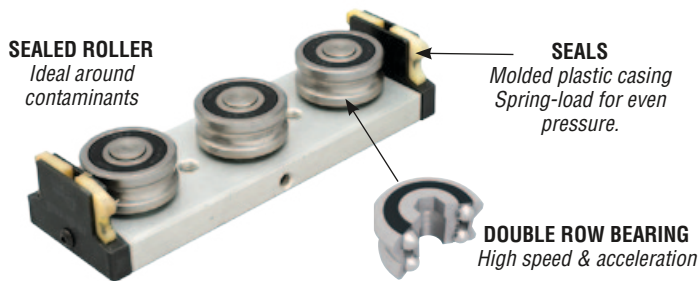
- Easy adjusting - patented pre-load adjustment eliminates eccentricity
- Integral seals
- Bearings sealed against contamination
- Gothic arch rollers
- Maximum temperature approximately 80°C.
- Oil-filled plastic or UHMW spring loaded seals
- Custom roller configurations can be designed, engineered, and manufactured to meet your specific requirements.



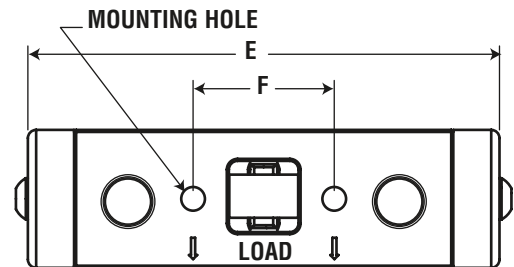
APPLICATIONS

- Automation
- Material Handling
- Assembly
- Packaging

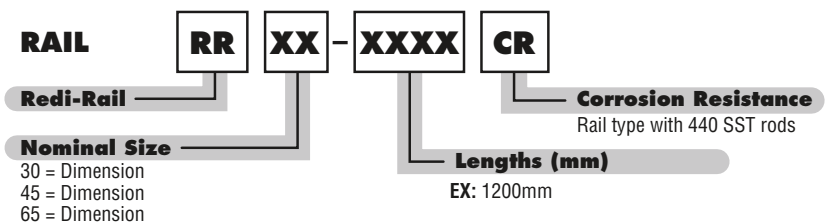
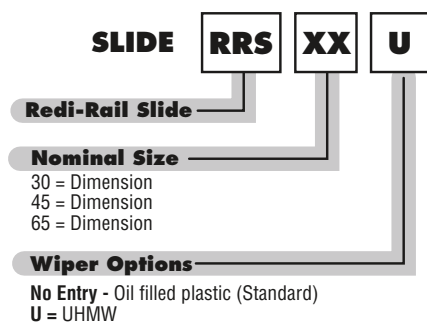
SLIDE DIMENSIONS



PART #	A1	A	B	C	D	E	F	WT (LBS.)	MOUNTING HOLES
RRS30	22.6	28	25.4	30	0.76	86.9	26	0.09	M5 x 0.8
RRS45	25.8	33	38.1	45	15.9	117	36	0.23	M8 x 1.25
RRS65	32.3	42	50.8	65	20.4	162	52	0.54	M8 x 1.25



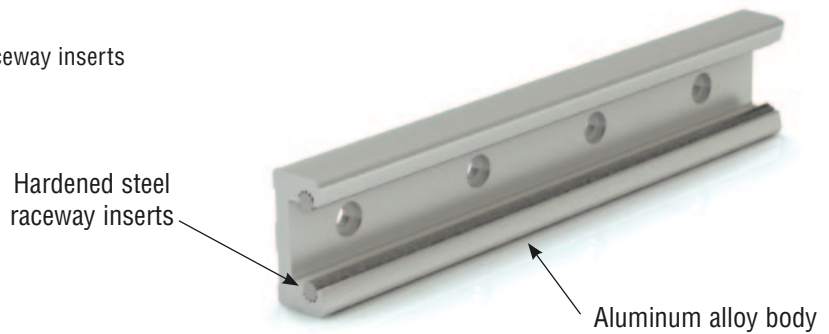
ORDER INFORMATION



NOTES: Felt wipers have been replaced by low friction oil impregnated plastic wipers. No entry in the part # results in use of oil impregnated wiper.

FEATURES & BENEFITS

- Maximum lengths up to 5800 mm
- Aluminum alloy raceway with hardened steel raceway inserts
- Butt-joinable for longer lengths
- Patented pre-load adjustment
- Cut-to-length or custom solutions designed and engineered to your application



Hardened steel raceway inserts

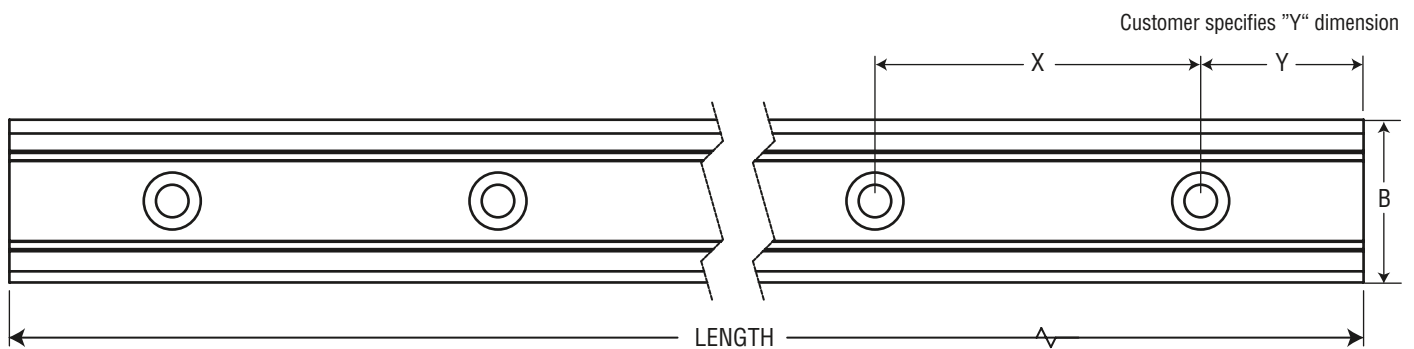
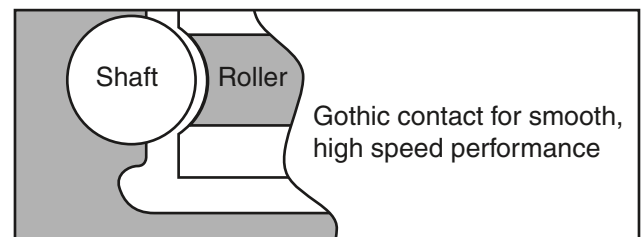
Aluminum alloy body

RAIL DIMENSIONS

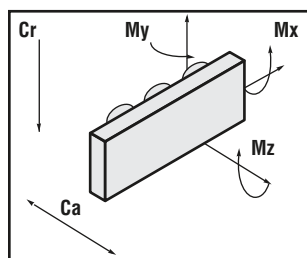
PART #	X	B	MOUNTING HOLE	Y
RR30	60	30	M5	30
RR45	60	45	M6	30
RR65	80	65	M6	40

NOTE: Rail lengths are available up to 6 m.

ROLLER/SHAFT INTERFACE



LIFE CALCULATIONS



Cd = Dynamic capacity (LC)
 Cr = Radial capacity
 Ca = Axial capacity
 Mx, My, Mz = Moment capacities

Conversions

newton (N) x 0.2248 = lbs.
 (lbf) meter x 0.0397 = inch
 newton - meter (Nm) x 8.851 = in.-lbs.

PART #	CD (N)	CR (N)	CA (N)	MX (N-m)	MY (N-m)	MZ (N-m)
RRS30	1440	1000	330	1.8	5.5	12.5
RRS45	4404	2660	827	6.6	19.9	47.9
RRS65	10200	5950	1678	19.0	58.2	154.7

FEATURES & BENEFITS

- Low cost precision
- Up to 19' lengths
- Aluminum alloy body
- Bearings sealed against contamination
- Rollers mounted with hardened steel accessories
- Not available with seals
- Maximum temperature approximately 180°F
- Factory adjusted
- Gothic arch rollers

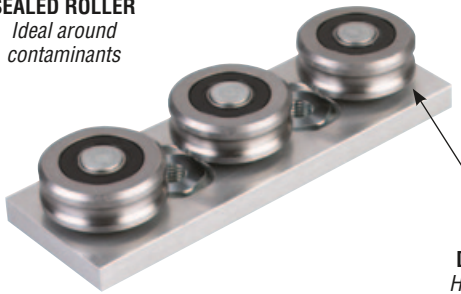


APPLICATIONS

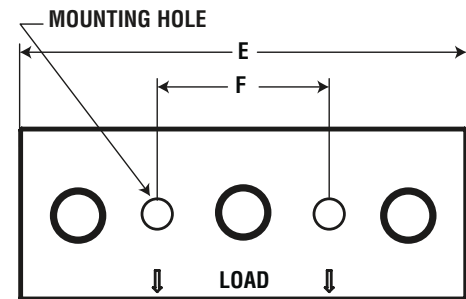
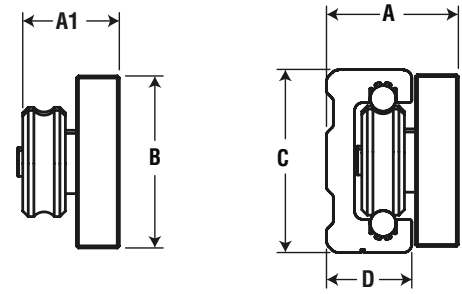
- Medical Precision
- Automation
- Material Handling
- Packaging

SLIDE DIMENSIONS

SEALED ROLLER
Ideal around contaminants



DOUBLE ROW BEARING
High speed & acceleration



PART #	A1	A	B	C	D	E	F	MOUNTING HOLES	WT (LBS.)
RRS14	0.702	0.959	1.25	1.33	0.62	3.25	1.25	1/4-28	0.25
RRS18	0.823	1.134	1.50	1.921	0.76	4.50	1.625	5/16-24	0.50

ORDER INFORMATION

SLIDE

RRS

XX

Redi-Rail Slide

Nominal Size

14 = Dimension
18 = Dimension

RAIL

RR

XX

XXX.XXX

CR

Redi-Rail

Nominal Size

14 = Dimension
18 = Dimension

Length

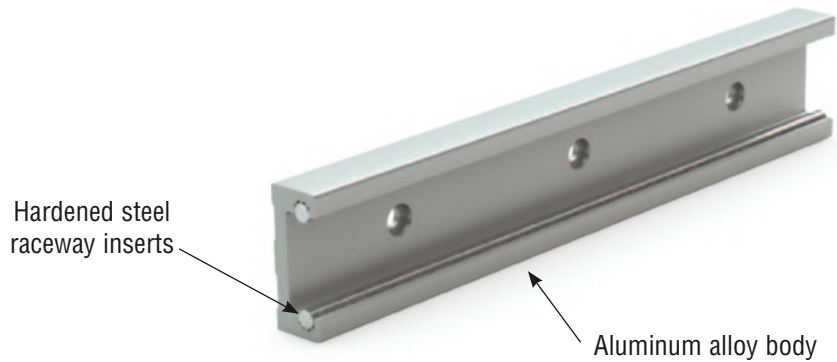
Specify length in inches

Corrosion Resistance
Rail type with 440 SST rods

RAIL DIMENSIONS

Part #	X	B	WT. (lbs./ft.)
RR14	3.5	1.32	0.56
RR18	3.5	1.91	0.85

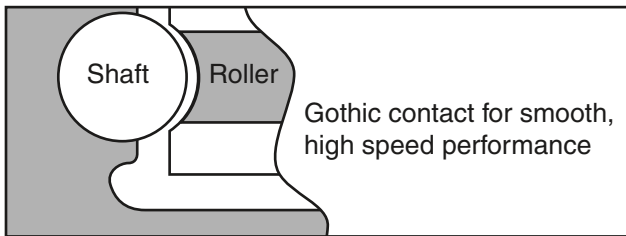
NOTE: Rail lengths are available up to 19' (6 m).



Hardened steel raceway inserts

Aluminum alloy body

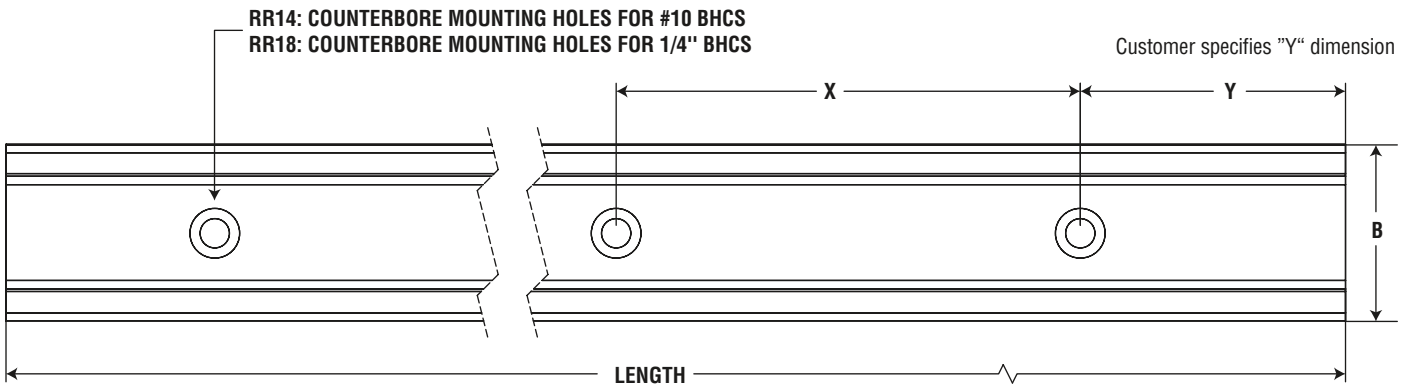
ROLLER/SHAFT INTERFACE



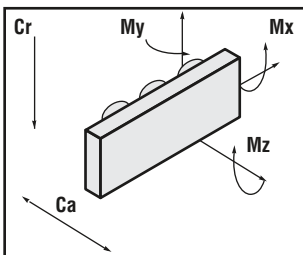
Shaft

Roller

Gothic contact for smooth, high speed performance



LIFE CALCULATIONS



Cd = Dynamic capacity (LC)
Cr = Radial capacity
Ca = Axial capacity
Mx, My, Mz = Moment capacities

Conversions

newton (N) x 0.2248 = lbs.
(lbf) meter x 0.0397 = inch
newton - meter (Nm) x 8.851 = in.-lbs.

PART #	Cd (LBS.)	Cr (LBS.)	Ca (LBS.)	Mx (IN-LBS.)	My (IN-LBS.)	Mz (IN-LBS.)
RRS14	421	340	79	21	54	201
RRS18	1032	850	168	67	153	677

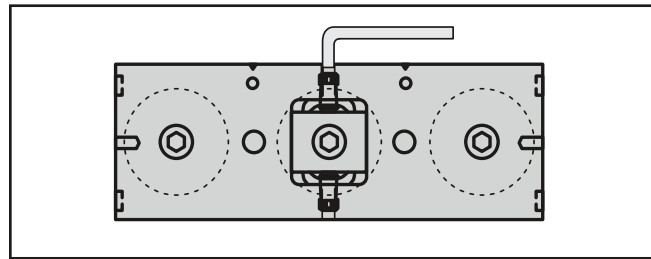
TECHNICAL INFORMATION

ADJUSTING SLIDE PRELOAD

The preload of a slide should be properly set from the factory, but if you must adjust it yourself, here are some simple steps to follow.

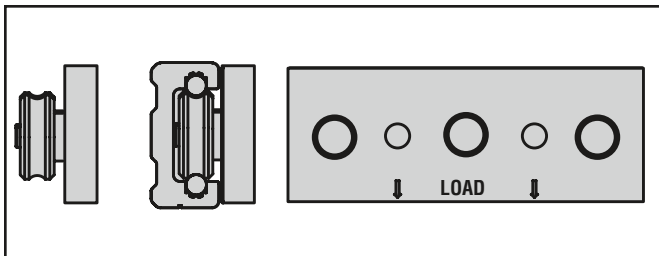
Metric Series

1. To loosen the eccentric (center) roller, use an Allen wrench to loosen the screw that is on the side of the mounting block. Be sure to loosen the screw that is on the side of the direction you want the roller to move.
2. When it is loose, tighten the set screw on the opposite side of the block. This will move the roller and mounting stud.
3. Make a very small change, retighten the first set screw, and try it out. If the preload is too loose, you will feel the slider rock and you will hear a slight “clunk.” If it is too tight, the slider will roll rough, like riding a bicycle on a gravel road.
4. Move the slide along the length of the rail by hand. Adjust it so that it does not feel loose anywhere. It may take you several times to get the proper adjustment.
5. Make sure the rollers are tightened with the proper adjustment prior to operation.



SLIDER ORIENTATION

The 3-Roller slide should be installed in the rail so the load is shared on the two outside rollers. The orientation marks indicate how to align the slider with the load direction.



LUBRICATION - RAILS & BEARINGS

The rollers are internally lubricated for life, but the rails must always have a layer of grease. As a guideline, reapply fresh grease every 50,000 cycles.

SLIDER ORIENTATION

The 3-Roller slide should be installed in the rail so the load is shared on the two outside rollers. The orientation marks indicate how to align the slider with the load direction.

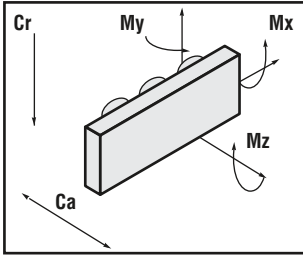
MOUNTING SLIDER BODY & MAX CAPACITY

Below are recommended bolt tightening torques for mounting to the slide body. Be sure to use bolts that are long enough to obtain full thread engagement.

MOUNTING TORQUE

PART NUMBER	IN-LBS. TORQUE	NM TORQUE
RRS14 RRS30	25	3
RRS18 RRS45	70	8
RRS65	150	24

LIFE CALCULATIONS



Cd = Dynamic capacity (LC)
 Cr = Radial capacity
 Ca = Axial capacity
 Mx, My, Mz = Moment capacities

Conversions

newton (N) x 0.2248 = lbs.
 (lbf) meter x 0.0397 = inch
 newton - meter (Nm) x 8.851 = in.-lbs.

INCH PART NO.	Cr (lbs.)	Ca (lbs.)	Mx (in.-lbs.)	My (in.-lbs.)	Mz (in.-lbs.)
RRS14	336	79	21	54	201
RRS18	847	168	67	153	677
METRIC	(N)	(N)	(Nm)	(Nm)	(Nm)
RRS30	1,002	330	1.8	5.5	12.5
RRS45	2,660	827	6.6	19.9	47.9
RRS65	5,950	1,678	19.0	58.2	154.7

To calculate an approximate life for Redi-Rail sliders, use the following equation.

Inch Series

The value of L_{RR} is in meters

$$L_{RR} = 10^7 \cdot (Cd / (\text{LoadEquiv} \cdot RF))^{3.0} \text{ (inches)}$$

LC_{RRS} = Slider Life Capacity which is found in the table

Load_{Equiv} = Equivalent Radial Load found from the following equation:

$$\text{Load}_{\text{Equiv}} = Cr \cdot \left(\frac{\text{Load}_{\text{Axial}}}{Ca} + \frac{M_x}{M_x \text{ Max}} + \frac{M_y}{M_y \text{ Max}} + \frac{M_z}{M_z \text{ Max}} \right) + \text{Load}_{\text{Radial}}$$

PART NO.	MAX SPEED (fpm)	MAX SPEED (ipm)	Cd
RRS14	500	6000	421
RRS18	800	9,600	1,032

Metric Series

The value of L_{RR} is in meters

$$L_{RR} = (Cd / \text{Load}_{\text{Equiv}} \cdot RF)^{3.0} \times 100,000 \text{ meters}$$

Cd = Slider Life Capacity which is found in the table

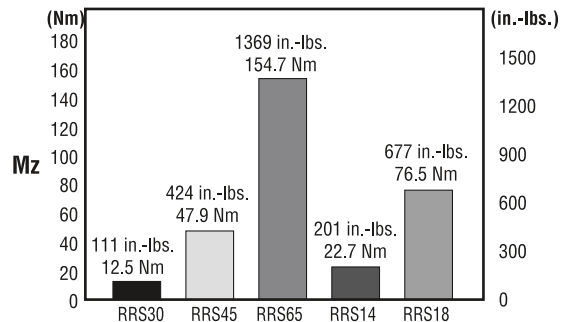
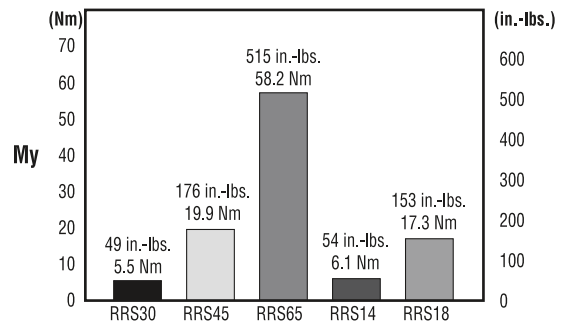
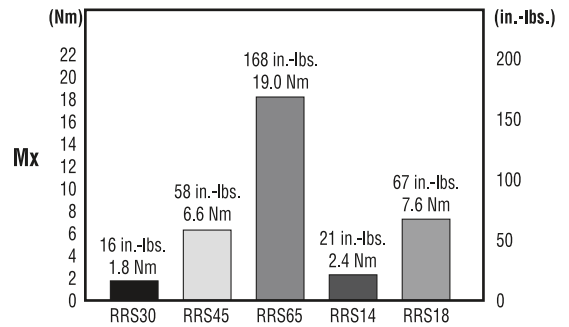
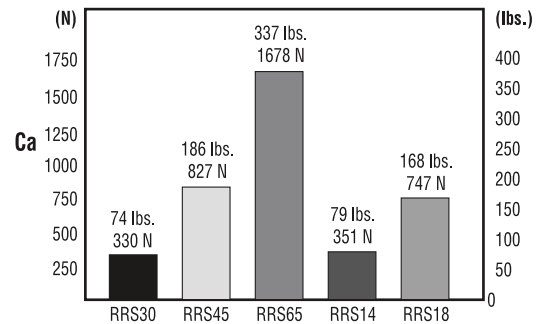
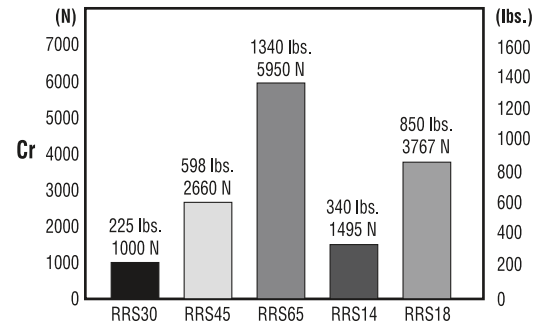
Load_{Equiv} = Equivalent Radial Load found from the following equation:

$$\text{Load}_{\text{Equiv}} = Cr \cdot \left(\frac{\text{Load}_{\text{Axial}}}{Ca} + \frac{M_x}{M_x \text{ Max}} + \frac{M_y}{M_y \text{ Max}} + \frac{M_z}{M_z \text{ Max}} \right) + \text{Load}_{\text{Radial}}$$

PART NUMBER	MAX SPEED (m/min)	MAX SPEED (m/s)	Cd (N)
RR30	300	5.0	1,440
RR45	420	7.0	4,404
RR65	480	8.0	10,200

NOTE: Reduction factors apply to both inch and metric series
 RF = Reduction Factor of the Application or Environment
 = 1.0 to 1.5 for very clean, low speed (<30% Max), low shocks
 = 1.5 to 2.0 for some dirtiness, moderate speed (30% Max to 75% Max), medium shocks and vibration
 = 2.0 to 3.0 for heavy dirt & dust, high speeds (>75% Max) and heavy shocks & vibrations

LOAD COMPARISON GRAPHS



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